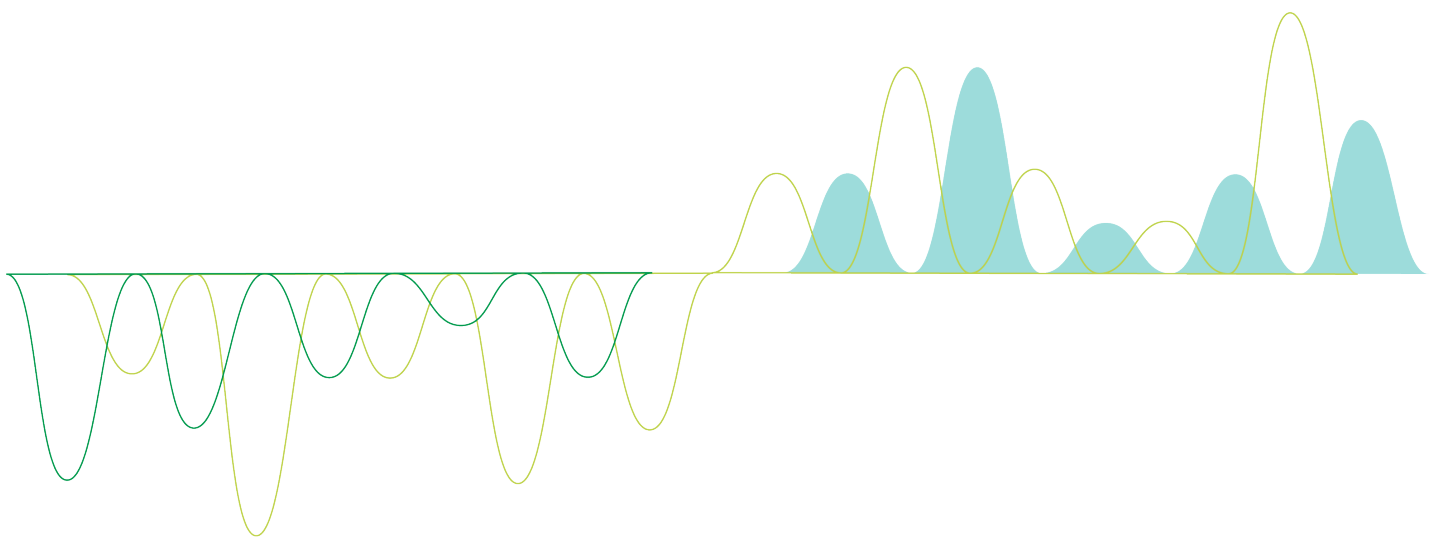


System requirements for Qlik Sense

Qlik Sense®

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1 System requirements for Qlik Sense Enterprise	4
1.1 Qlik Sense Enterprise on Windows	4
1.2 Qlik Sense Enterprise on Cloud Services	6
1.3 Qlik Sense Enterprise on Kubernetes	7
1.4 Qlik Sense Mobile app	7
2 Supported browsers	10
2.1 Improving performance in Internet Explorer	10
2.2 Supported Microsoft Windows browsers	10
2.3 Supported Apple Mac OS browsers	11
2.4 iOS	11
2.5 Android	11
2.6 Windows 10 phone	11


1 System requirements for Qlik Sense Enterprise

This section lists the requirements that must be fulfilled by the target system in order to successfully install and run Qlik Sense.

1.1 Qlik Sense Enterprise on Windows

<p>Platforms</p>	<ul style="list-style-type: none"> • Microsoft Windows Server 2012 R2 • Microsoft Windows Server 2016 • Microsoft Windows Server 2019 <p>For development and testing purposes only:</p> <ul style="list-style-type: none"> • Microsoft Windows 10 (64-bit version only) <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;">  <i>These operating systems are supported by Qlik Sense. Third-party software may require service packs to be installed.</i> </div>
<p>Processors (CPUs)</p>	<p>Multi-core x64 compatible processors</p> <p>We recommend that you use at least 4 cores per node in a Qlik Analytics Platform deployment.</p>
<p>Memory</p>	<p>8 GB minimum (depending on data volumes, more may be required)</p> <p>Qlik Sense is an in-memory analysis technology. The memory requirements for the Qlik Sense products are directly related to the amount of data being analyzed.</p>
<p>Disk space</p>	<p>5.0 GB total required to install</p>
<p>Storage</p>	<ul style="list-style-type: none"> • A network file share is required for the storage to be accessible by all servers in the site. In case of a single-server deployment, local disk storage may be sufficient. • Sufficient storage is required for the volume of apps and content used in the deployment. <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;">  <i>Qlik periodically runs network file share performance tests on Qlik Sense using WinShare, and FreeNAS with SMB 3.0. For more information on network file share solutions, contact your Qlik representative.</i> </div>

1 System requirements for Qlik Sense Enterprise

Security	<ul style="list-style-type: none"> • Microsoft Active Directory • Microsoft Windows Integrated Authentication • Third-party security
WebSockets	Web browsers and infrastructure components (such as proxies and routers) must support WebSockets.
.NET framework	4.5.2 or higher
PowerShell	4.0 or higher
Repository database Centralized logging database	<p>PostgreSQL 9.6.x (included in the installer), 11.5.x (not included in the installer)</p> <p>PostgreSQL is included in the Qlik Sense setup by default. However, you can also download and install it manually.</p> <div style="border: 1px solid gray; padding: 10px; margin: 10px 0;">  <p><i>The version of PostgreSQL 9.6.x installed with Qlik Sense does not include pgAdmin tools. You can download and install them manually if required.</i></p> </div> <p>PostgreSQL is an open source object-relational database management system. It is released under the PostgreSQL license, which is a free and open source software license.</p>
Internet protocol	<ul style="list-style-type: none"> • IPv4 • IPv6 • Dual stack (IPv4 and IPv6)
Network	The configured hostname must resolve to an IP address on the host machine.
Qlik Management Console (QMC), supported browsers	<p>The following browsers are supported for accessing the QMC.</p> <p>Supported Microsoft Windows browsers:</p> <ul style="list-style-type: none"> • Microsoft Internet Explorer 11 • Microsoft Edge (only for Microsoft Windows 10) • Google Chrome • Mozilla Firefox (requires hardware acceleration, not supported in virtual environments) <p>CefSharp embedded browser v55 or later (CefSharp allows you to embed the Chromium open source browser inside .Net apps)</p> <p>Supported Apple Mac OS browsers:</p> <ul style="list-style-type: none"> • Apple Safari 10 or later • Google Chrome • Mozilla Firefox (requires hardware acceleration, not supported in virtual environments)

1 System requirements for Qlik Sense Enterprise

QMC, minimum screen resolution	Desktops, laptops, and Apple Mac: 1024x768 No mobile or small screen support.
QlikView compatibility	It is not possible to install Qlik Sense on a machine with QlikView Server already installed.
Insights	<p>Natural Language Processing (NLP) support for Insights requires a CPU that supports Advanced Vector Extensions (AVX) instructions. To find out if your CPU supports AVX, download Coreinfo v3.5 from Microsoft to view your CPU and memory topology.</p> <p>Coreinfo v3.5 - Dump information on system CPU and memory topology Copyright (C) 2008-2020 Mark Russinovich Sysinternals - www.sysinternals.com ...</p> <p>Intel(R) Core(TM) i7-9850H CPU @ 2.60GHz Intel64 Family 6 Model 158 Stepping 13, GenuineIntel Microcode signature: 000000CA HTT * Hyperthreading enabled HYPERVISOR * Hypervisor is present ...</p> <p>AES * Supports AES extensions AVX * Supports AVX instruction extensions FMA * Supports FMA extensions using YMM state ...</p> <p>Logical Processor to Group Map: ***** Group 0</p>



We do not recommend that you install Qlik Sense on domain controller machines, as group policies may prevent Qlik Sense from getting access to required services.

1.2 Qlik Sense Enterprise on Cloud Services

Maximum app size	500 MB
Total cloud storage	500 GB
Maximum concurrent reloads	5
Maximum reloads per day	100



When distributing to Qlik Cloud Services, your Qlik Sense Enterprise on Windows deployment must be either the current version or one of the previous two releases (starting from the June 2018 release).

1.3 Qlik Sense Enterprise on Kubernetes

The Kubernetes environment must have Internet access to the Qlik Helm and Container Image repository.

Kubernetes service vendors:

Kubernetes environments

- Microsoft Azure using Azure Kubernetes Service (AKS)
- Amazon Web Services (AWS) using Amazon Elastic Container Service for Kubernetes (EKS)
- Amazon Web Services (AWS) deployed via Kubernetes Operations (KOPs)
- Google Cloud using Google Kubernetes Engine (GKE)
- Red Hat OpenShift 4+

Non-managed Kubernetes deployments:

- Kubernetes cluster greater than v1.10.x and less than v1.16.x

Kubernetes package manager

Helm greater than v2.12.0 and less than v2.15.x

Local/Evaluation/Test environment

Windows: Minikube v0.33 +

Red Hat MiniShift v1.21.0+

Mac: Docker for Desktop with Kubernetes enabled: v2.0.0.3

Database

MongoDB 3.6+

File system

Storage attached to the cluster that supports ReadWriteMany. This can be configured as a Storage Class or a Persistent Volume Claim

Processors (CPUs)

Minimum 4 cores (additional depending on data volumes)

Memory

Minimum 8 GB (additional depending on data volumes)

Disk space

5 GB total required to install

IDP

For user authentication an OIDC compatible IDP is required

1.4 Qlik Sense Mobile app

iOS and iPadOS supported versions:

Qlik Sense Mobile for iOS

- iOS 11.2 or later
- iPadOS 13



iOS 11.0 or later is required for SAML authentication.

1 System requirements for Qlik Sense Enterprise

Device compatibility:

- iPad Air 2 or later
- iPad Pro or later
- iPhone 6 and 6 Plus
- iPhone 6S and 6S Plus
- iPhone 7 and 7 Plus
- iPhone 8 and 8 Plus
- iPhone X

Qlik Sense Mobile for iOS compatibility with Qlik Sense:

- Qlik Sense September 2017 and later releases
- Qlik Sense November 2018 or later is required to access mashups from the Qlik Sense Mobile for iOS app.



Qlik Sense February 2018 or later is required to reduce the size of apps for download to your iOS device.

Android OS supported versions:

- Android 6.0 or later with 64-bit kernel

Device compatibility:

- 64-bit CPU architecture (ARM)
- RAM: 2 GB or more is recommended
- Screen resolution: 720x1280 HDPI (267 ppi)

**Qlik Sense
Mobile for
Android**

Qlik Sense Mobile for Android compatibility with Qlik Sense:

- Qlik Sense November 2018 and later releases

Qlik Sense Mobile per-app VPN through Enterprise Mobile Management (EMM) is designed to work with the environments and versions listed in this section.

Qlik Sense Enterprise November 2017 or later:

- iPad with iOS version 11.2.2 or later.
- iPhone with iOS version 11.2.2 or later.

**Per-app VPN
support**

Qlik Sense Enterprise November 2018 or later:

- Android version 6.0 or later.

Access to Qlik Sense Enterprise using AirWatch per-app VPN is supported on the following browsers:

- VMware browser

1 System requirements for Qlik Sense Enterprise

- AppleSafari
- GoogleChrome
- MobileIron Web@Work

2 Supported browsers

Qlik Sense is designed to work on the platform and web browser combinations described in this section, using default browser settings.

Each Qlik Sense release is tested for compatibility with the latest publicly available browser versions. Due to the frequency of browser version updates, Qlik does not include specific browser version numbers in the system requirements.

Each Qlik Sense release is compatible with and supported on the latest iOS versions that are publicly available at the time of the Qlik Sense release. Due to the frequency of iOS version updates, Qlik does not include specific iOS version numbers in the system requirements.



Minimum screen resolution for desktops and laptops is 1024x768; tablets is 1024x768; small screens is 320x568.

2.1 Improving performance in Internet Explorer

Qlik Sense connects to your browser using WebSockets. Each new tab that you open uses additional WebSocket connections. By default, Internet Explorer 11 limits the number of WebSocket connections to 6 per Internet Explorer session. This can limit your ability to open new tabs or configuration windows.

Your Windows administrator can change this setting using the Local Group Policy Editor. The setting is available under Administrative Templates > Windows Components > Internet Explorer > Security Features > AJAX > Set the maximum number of WebSocket connections per server. Only your system administrator should change this configuration.

You can also open apps in new Internet Explorer sessions, instead of new tabs. If an app will not open in a new tab, copy the url from the address bar in the Internet Explorer tab. Select File > New Session from the Internet Explorer top menu. Paste the url in the address bar, and then press Enter. The app opens in the Internet Explorer new session window.

2.2 Supported Microsoft Windows browsers

The following browsers can be used on supported Microsoft Windows and Microsoft Windows Server machines to access the Qlik Management Console (QMC) and the hub:

- Microsoft Internet Explorer 11
- Microsoft Edge (only for Microsoft Windows 10)
- Google Chrome
- Mozilla Firefox (requires hardware acceleration, not supported in virtual environments)

CefSharp embedded browser v55 or later (CefSharp allows you to embed the Chromium open source browser inside .Net apps)

2.3 Supported Apple Mac OS browsers

The following browsers can be used on supported Apple Mac OS machines to access the Qlik Management Console (QMC) and the hub:

- Apple Safari 10 or later
- Google Chrome
- Mozilla Firefox (requires hardware acceleration, not supported in virtual environments)

2.4 iOS

Version 11.2 or later (script editing is not supported on tablet devices).

Qlik Sense version: Qlik Sense Enterprise September 2017 or later.

Supported devices:

- iPad Air or later
- iPhone 5S or later

Supported browsers:

- Apple Safari
- VMware browser (using AirWatch per-app VPN)
- BlackBerry Access 2.9.1 or later (using BlackBerry Dynamics platform)



iOS 11.3 is required for using BlackBerry Access browser.

2.5 Android

Version 6.0, 7.1, 8.1 and 9.0 (script editing is not supported on tablet devices):

- Google Chrome
- BlackBerry Access 2.9.1 or later (using BlackBerry Dynamics platform)

2.6 Windows 10 phone

- Microsoft Edge