

CAYUGA R14. SYSTEM REQUIREMENTS.



Modules	Supported Operating Systems	Notes
Core Service Device Management, Multimedia Database, Versatile Applications (i.e. Analytics, LPR)	Microsoft Windows® 7 SP1 (Home Premium, Professional, Ultimate, Enterprise) 32 and 64 Bit Microsoft Windows® 8.1 (Standard, Professional, Enterprise) 32 and 64 Bit Microsoft Windows® 10 (Pro, Enterprise) 32 and 64 Bit Microsoft Windows Server® 2008 R2 SP1 (Standard, Enterprise) 64 Bit Microsoft Windows Server® 2012 (Standard, Datacenter) 64 Bit Microsoft Windows Server® 2012 R2 (Standard, Datacenter) 64 Bit Microsoft Windows Server® 2016 (Standard, Datacenter) 64 Bit Microsoft Windows Server® 2019 (Standard, Datacenter) 64 Bit	<ul style="list-style-type: none"> Only listed OS are supported Latest OS updates required Windows® Embedded is not supported Cayuga Analytics in general and Counting Suite work only as 32 Bit process within a 64 Bit OS Windows 2016 (64 Bit) is recommended Please contact Qognify Project Engineering or Support if you want to use Virtual Machines LPR on virtual machines could cause issues and is only supported in case of planned by Qognify. Please contact Qognify We do not support the so called „nano server“ AES-encrypted export assumes a cpu with AES acceleration, otherwise export duration can increase significantly”
SDK Native Client Portable Viewer	Microsoft Windows® 7 SP1 (Home Premium, Professional, Ultimate, Enterprise) 32 and 64 Bit Microsoft Windows® 8.1 (Standard, Professional, Enterprise) 32 and 64 Bit Microsoft Windows® 10 (Pro, Enterprise) 32 and 64 Bit Microsoft Windows Server® 2008 R2 SP1 (Standard, Enterprise) 64 Bit Microsoft Windows Server® 2012 (Standard, Datacenter) 64 Bit Microsoft Windows Server® 2012 R2 (Standard, Datacenter) 64 Bit Microsoft Windows Server® 2016 (Standard, Datacenter) 64 Bit Microsoft Windows Server® 2019 (Standard, Datacenter) 64 Bit	<ul style="list-style-type: none"> Only listed OS are supported Latest OS updates required Windows® Embedded is not supported Windows® 10 (64 Bit) is recommended .NET 4.6.2 or later is required and is part of the installer Desktop Experience must be activated for Windows Server The Portable Viewer has same requirements as the Native Client, but presupposes .NET 4.6.2
Mobile Client for iPhone/iPad	Apple iOS devices with iOS 11 or higher	<ul style="list-style-type: none"> Optimized for iPad
Mobile Client for Android	Android devices with Android 6.0 ‚Marshmallow‘ or higher	<ul style="list-style-type: none"> Optimized for tablets Future releases will require Android 7 ‚Nougat‘ or higher

CAYUGA R14. SYSTEM REQUIREMENTS.



Modules	Supported Operating Systems	Notes
Webclient	<p>Google Chrome >= 72 Mozilla Firefox >= 65 Microsoft Internet Explorer >= 11 Microsoft Edge, Apple Safari, Opera</p>	<ul style="list-style-type: none"> Google Chrome recommended
BVI Server	<p>Microsoft Windows® 7 SP1 (Home Premium, Professional, Ultimate, Enterprise) 64 Bit Microsoft Windows Server® 2008 R2 SP1 (Standard, Enterprise) 64 Bit Microsoft Windows® 10 (Enterprise) 64 Bit Microsoft Windows Server® 2012 R2 (Standard, Datacenter) 64 Bit Microsoft Windows Server® 2016 (Standard, Datacenter) 64 Bit</p>	<ul style="list-style-type: none"> Only listed OS are supported Windows® Embedded is not supported Windows 2016 (64 Bit) is recommended We do not support the so called „nano server“
BVI Client	<p>Microsoft Windows® 7 SP1 (Home Premium, Professional, Ultimate, Enterprise) 64 Bit Microsoft Windows Server® 2008 R2 SP1 (Standard, Enterprise) 64 Bit Microsoft Windows® 10 (Enterprise) 64 Bit Microsoft Windows Server® 2012 R2 (Standard, Datacenter) 64 Bit Microsoft Windows Server® 2016 (Standard, Datacenter) 64 Bit</p>	<ul style="list-style-type: none"> Only listed OS are supported Windows® Embedded is not supported Windows® 10 Version (64 Bit) is recommended .NET 4.6.2 or later is required and is part of the installer
BVI Web Service	<p>Google Chrome >= 72 Mozilla Firefox >= 65 Microsoft Internet Explorer >= 11 Microsoft Edge, Apple Safari, Opera</p>	<ul style="list-style-type: none"> Google Chrome recommended

CAYUGA R14. SYSTEM REQUIREMENTS.



Type of installation	Hardware requirement	Notes
Core Service running as Master connected to Core Service Slaves (CSS)	<p>Recommended for <50 Core Service Slaves: CPU: Intel Core i3-8350K @ 4.00GHz or Intel Xeon E3-1230 v6 @ 3.50GHz RAM: 16 GB</p> <p>Recommended for <200 Core Service Slaves: CPU: Intel Core i5-8600K @ 3.60GHz or Intel Xeon E3-1275 v6 @ 3.80GHz RAM: 24 GB</p> <p>Recommended for >200 Core Service Slaves: CPU: Intel Core i7-8700K @ 3.70GHz or Intel Xeon E-2186G @ 3.80GHz RAM: 32 GB HDD: 500 GB free disk space @ 7200 RPM or SSD Network: Ethernet with 1000 MBit/s</p> <p>Minimum: CPU: Intel Core i5-7400 @ 3.00GHz RAM: 8 GB HDD: 100 GB free disk space Network: Ethernet with 1000 MBit/s</p>	
Core Service running as Master without Core Service Slaves (CSS) or running as CSS	<p>Recommended: CPU: Intel Core i5-8600K @ 3.60GHz or Intel Xeon E3-1275 v6 @ 3.80GHz RAM: 16 GB HDD: 500 GB free disk space @ 7200 RPM or SSD Network: Ethernet with 1000 MBit/s</p> <p>Minimum: CPU: Intel Pentium G4560 @ 3.50GHz RAM: 4 GB HDD: 100 GB free disk space Network: Ethernet with 1000 MBit/s</p>	

CAYUGA R14. SYSTEM REQUIREMENTS.



Type of installation	Hardware requirement	Notes
Core Service Device Management (DM)	<p>Recommended: CPU: Intel Core i5-8600K @ 3.60GHz or Intel Xeon E3-1275 v6 @ 3.80GHz RAM: 16 GB (video throughput < 20 MByte/s) , 24 GB (video throughput > 20 MByte/s) HDD: 500 GB free disk space @ 7200 RPM or SSD Network: Ethernet with 1000 MBit/s</p> <p>Minimum: CPU: Intel Pentium G4560 @ 3.50GHz RAM: 4 GB (+ 2 GB if server-side Motion Detection is used) HDD: 100 GB free disk space Network: Ethernet with 1000 MBit/s</p>	
Device Management (DM)	<p>Recommended: CPU: Intel Core i5-8600K @ 3.60GHz or Intel Xeon E3-1275 v6 @ 3.80GHz RAM: 16 GB (video throughput < 40 MByte/s) , 24 GB (video throughput > 40 MByte/s) HDD: 500 GB free disk space @ 7200 RPM or SSD Network: Ethernet with 1000 MBit/s</p> <p>Minimum: CPU: Intel Pentium G4560 @ 3.50GHz RAM: 4 GB (+ 2 GB if server-side Motion Detection is used) HDD: 100 GB free disk space Network: Ethernet with 1000 MBit/s</p>	
Versatile Applications (i.e. Analytics, LPR)	See Device Management Server-side Motion Detection: Max. 10 channels per CPU core	Please contact Qognify Project Engineering or Support to get a precise recommendation

CAYUGA R14. SYSTEM REQUIREMENTS.



Type of installation	Hardware requirement	Notes
Native Client / SDK	<p>Recommended: CPU: Intel Core i5-8600K @ 3.60GHz or Intel Xeon E3-1275 v6 @ 3.80GHz RAM: 16 GB HDD: 50 GB free disk space @ 7200 RPM or SSD Network: Ethernet with 1000 MBit/s Graphics Adapter: At least 4GB GDDR5 RAM, memory bandwidth at least 100 GB/sec.</p> <p>Minimum: CPU: Intel Pentium G4560 @ 3.50GHz RAM: 4 GB HDD: 10 GB free disk space Network: Ethernet with 100 MBit/s or faster Dedicated Graphics Adapter without Shared Memory, 16 Mio. colors, supporting DirectX 9.0 or higher, Memory Bandwidth >= 100 GB/s, Memory Size >= 2 GB</p> <p>Recommended display resolution: 1920 x 1080 or higher</p> <p>Minimum display resolution: 1280 x 768 (with text size 100%) 1600 x 960 (with text size 125%) 1920 x 1152 (with text size 150%)</p>	<ul style="list-style-type: none"> Deviation from the recommendation can cause stumbling rendering and other negative side effects onboard graphic is not supported We recommend not to use more than one Graphics Adapter Please use always the latest graphics adapter-drivers Qognify recommends not to use Nvidia NVS, Mobile or Matrox graphic cards (Performance too low) For further Graphics Cards information please read https://downloads.seetec-video.com/fileadmin/01DL/doc/Qognify.Cayuga.graphics.cards.suggestion-EN.pdf
BVI Server	<p>Minimum: CPU: Intel Core i5-8600K @ 3.60GHz or Intel Xeon E3-1275 v6 @ 3.80GHz RAM: 16 GB HDD: 500 GB free disk space @ 7200 RPM or SSD Network: Ethernet with 1000 MBit/s</p>	We recommend a dedicated SSD for BVI Server with 100 GB free disk space
BVI Client	See „Native Client“, but at least 16 GB RAM mandatory	See all notes for „Native Client“

CAYUGA R14. SYSTEM REQUIREMENTS.



General hints

Please watch out for the latest updated System Requirements and Parameters on https://www.seetec-video.com/fileadmin/user_upload/software/R14/System_Requirements_and_Parameter.pdf

Windows® Operating System	64-Bit versions are recommended. Please install always the latest os updates. Microsoft support for Windows® 7 and Windows® Server 2008 will end January 14, 2020. After that date, also Qognify products won't support these operating systems and Windows 8.1 any more. Support for Windows 32 bit is deprecated and Cayuga R14 will be the last release supporting it.
Windows Clustering	<ul style="list-style-type: none">▪ Windows® Server 2008 (R2 SP1) supported▪ Windows® Server 2012 (R2) not supported
Virtual environments	<ul style="list-style-type: none">▪ We recommend not to use clients in virtual environments, because the rendering performance is not satisfactory.▪ We recommend dedicated network interfaces.▪ Virtualization could need more cpu power than its physical counterpart.▪ We recommend direct attached storage or iSCSI.▪ Because virtualization can in general decrease the performance, we recommend to test the planned server environment.▪ Cayuga is compatible with Citrix XEN, VMware vSphere and Microsoft Hyper-V.
Thin Clients	Thin Client environments are not supported.
CPU recommendations	Video processing demands much cpu power. We recommend always to use the latest, most powerful cpu models. You can find a comparison at https://www.cpubenchmark.net/high_end_cpus.html . In general, we recommend single socket server with up to 10 physical cores.

CAYUGA R14. SYSTEM REQUIREMENTS.

General hints

Please note: Web guard and Internet Security features must not be installed on Cayuga systems!

To run Cayuga software properly, it is important that you exclude specific locations, processes and certain network traffic. Without configuring these exceptions, virus scanning could use a high amount of system resources. Additionally the scanning process could temporarily lock files, which could lead to a disruption in the recording process or even to database corruption.

Do not perform a real time and system scan of Cayuga directories containing recording databases (by default C:\Program Files\Qognify, as well as all folders under that location). Avoid also to perform a real time and system scan on archive storage directories.

Virus scanning

Create the following additional exclusions:

- C:\Program Files\Qognify and all subdirectories.
- Path to Multimedia Database Zone(s)

Exclude real time network scanning on TCP ports: Please refer to "Cayuga R14 Used Ports" document:

https://downloads.seetec-video.com/fileadmin/01DL/6.14.1/documentation/Cayuga_R14_Used_Ports.pdf

Exclude network scanning of the following processes:

All processes starting with VMS_* (e.g. VMS_Client.exe)

Firewalls

Multiple ports on the server computer must be available by default to allow the Cayuga software to function correctly in a network environment with a firewall.

Please refer to "Cayuga R14 Used Ports" document:

https://downloads.seetec-video.com/fileadmin/01DL/6.14.1/documentation/Cayuga_R14_Used_Ports.pdf

CAYUGA R14. SYSTEM REQUIREMENTS.

General hints

Network layout

According to the amount of cameras in your system and the resulting used network bandwidth you should consider to use multiple separate networks for the cameras, the clients and the storage to prevent an overload on your network. This depends on the bandwidth. Since the Cayuga/BVI Client does not need a direct connection to the cameras, the only module which needs access to both networks is the Cayuga Device Manager.

Teaming / Bounding of network interfaces

Please do not use these kind of functions!

Multimedia Database Filesystem

We recommend NTFS for Microsoft Windows® with a cluster size of 64 KB and not to use Microsoft Windows® ReFS.

Usage of cameras

Cameras should usually be referenced only once. Configuring a camera multiple times per installation or in different installations will cause problems with several manufacturers. Please contact Qognify Project Engineering for further information.

CAYUGA R14. SYSTEM PARAMETER.



Description and Comments	Value
Maximum number of video channels to be served by Cayuga within one installation.	5000 Contact Qognify Project Engineering for detailed project planning in case you want to use more
Maximum number of video channels per Device Manager server. A reduction of the amount of video channels might be advisable in dependence on the amount of video recordings to be stored.	250 Contact Qognify Project Engineering for detailed project planning in case you want to use more
Maximum number of video channels per Device Manager server, if also video analytics will run on the same server. The final amount of video channels will depend on the performance consumption of the applied analytics software.	20 - 80
Maximum number of servers with installed service „Core Slave“ being connected to the one server running the service „Core Master“.	250
Maximum number of Device Manager servers running in a Cayuga system.	250
Maximum number of AutoUpdaterClients in a Cayuga system.	250
Maximum time in minutes until all services are connected to the „Core Master“ when the „Core Slave“ has failed (same time for switching back). A failover will happen when services cannot reach the „Core Slave“ anymore (e.g. if the „Core Slave“ or parts of the network are unavailable).	2 minutes
Maximum time in minutes until the secondary Device Manager has taken over control from the primary Device Manager (same time for switching back). A failover will happen (if activated) when the primary Device Manager is not accessible; the whole failover time span is determined to avoid flickering.	2 minutes

CAYUGA R14. SYSTEM PARAMETER.



Description and Comments	Value
Maximum number of concurrent native (Windows) clients in one Cayuga installation.	200
Maximum number of concurrent web clients in one Cayuga installation.	20
Maximum number of concurrent mobile clients in one Cayuga installation.	50
WMaximum number of attached Cayuga installation for Multi Installation Login	50 independant Cayuga installations with an overall max. of 5000 devices. Contact Qognify Project Engineering for detailed project planning in case you want to use more.
Recommended minimum bandwidth between a native client and any server. The required bandwidth depends on the number of video channels to be simultaneously displayed and could exceed the mentioned value significantly.	2 MBits/s
Recommended minimum bandwidth between „Core Master“ and any „Core Slave“. The required bandwidth depends on the number of video channels and could exceed the mentioned value significantly.	2 MBits/s
Recommended bandwidth between „Core Master“ and the Cayuga server providing patches and new loads for a remote update or upgrade of the local installation. This bandwidth is only required if automated updates and upgrades where selected in the „Autoupdater“.	10 MBits/s
Maximum number of SEI devices and states	1000 items with 10 states each