



iQ·link[®]

Enterprise System Requirements



Table of Contents

Operating System	3
Hardware Requirements	3
Typical Client-Server Installation Configurations	4
Client PC Access Software	4
Server Configurations	5
Remote Access for Support	5

Please note: The suggested configurations below may change significantly based on the number of links in your network and the size of the GIS data. It is recommended to ask a Comsearch Product Support Engineer for a hardware recommendation specific to your requirements.

Operating System (bare metal, virtual and cloud)

iQ:link is available to run on any hardware which has one of the following operating systems installed:

1. Red Hat Enterprise 7+ Linux (64-bit AMD and 64-bit Intel)
2. CentOS 7+ Linux (x86_64)
3. Windows 10, Windows Server 2012 and 2016 (Intel or AMD CPU)

Hardware Requirements (bare metal, virtual and cloud)

CPU

iQ:link requires the following additional amount of CPU power available for each simultaneous user, above what is required for the operating system and any other installed software:

- | | |
|---------------------------------|---------------------------------|
| 1. Red Hat Enterprise 7+ Linux: | an additional 600 MHz/core/user |
| 2. CentOS 7+ Linux: | an additional 600 MHz/core/user |
| 3. Windows Server: | an additional 800 MHz/core/user |

RAM

For all of the operating systems, iQ:link requires approximately 1024 MB of free RAM for each simultaneous user, above what is required for the operating system and other installed software.

Storage

For all operating systems, iQ:link requires approximately 4 GB of free disk space, above what is required for user workspace, the operating system, Oracle and any other installed software. A typical stand-alone installation might resemble the following:

- 25GB** Operating System
- 12GB** Oracle
- 4G** iQ:link
- 10–600GB** For terrain and morphology data. This is dependent on the amount and resolution of terrain and morphology data.
- 5GB** For working space
- TOTAL:** ~56–600GB depending on the amount of terrain and morphology data.

Relational Database

Oracle 10g or higher (additional license fees may be required if not using Oracle XE).

Typical Client-Server Installation Configurations

iQ:link Enterprise is normally used in a Client-Server configuration, where end-users access iQ:link via their Windows-based desktop PCs and Laptops and the iQ:link software is hosted on an Application Server.

Client PC Access Software

The client PC solution depends on the type of server that iQ:link is hosted on.

LINUX HOSTING: In situations where iQ:link is installed on a Red Hat or CentOS Application Server, a PC X-Emulation software can be used for client display. There are several different solutions from different manufacturers. Our recommendations are based on our experience and the experience of our customers.

For slow network connections we recommend:

- **X2Go:** <https://wiki.x2go.org/doku.php>
Requires Port 22 to be open between Client PC and Application Server

For use on local area networks with high-bandwidth network connections, the preferred X-Emulators are:

- **X-Manager:** www.netsarang.com
Port Requirements:
 - From remote host to local PC (Inbound):
 - TCP 6000 ~ 6010 for Xmanager
 - *TCP 16001 for Gnome only
 - From local PC to remote host (Outbound):
 - UDP 177 for XDMCP
 - TCP 512, 513, 514, 23, 22 for Xstart
- **Xming:** <http://sourceforge.net> (free)
Requires Port 6000 to be open between Client PC and Application Server

WINDOWS HOSTING: In situations where iQ:link is installed on a **Windows** Application Server (requires additional Terminal Server licenses):

- **Remote Desktop** (part of Windows) software can be used for client display
 - Requires Port TCP3389 to be open between client PC and Application Server
- **Citrix XenApp**
 - Requires Ports 80 and 443 to be open between the Client PC and Application Server
- **Citrix XenApp + Netscaler**
 - This solution is more complicated for initial setup; however, it enables the ability to deliver the solution over the normally open, secure port 443 and be delivered to any internet-connected PC with a web-browser and lite browser plugin.

AMAZON WEB SERVICES CLOUD HOSTING: If the cloud provider is Amazon Web Services, a service called AppStream is offered. This service enables an application, such as iQ:link, to be delivered (streamed) to any internet-connected PC with a Web Browser.

Server Configurations

There are 2 typical Application Server installation configurations (applicable to bare metal, virtual or cloud). After each case, an example specification is given, which can support up to 15 concurrent iQ:link users:

1. Single Application Server for front and back end:

- iQ:link, Oracle and GIS data all installed on a single Application Server

Example Cloud Application Server (min. recommended for up to 15 concurrent iQ:link users):

Instance Type: GPU Enabled
CPU: vCPU 18 core+
RAM: 64 GB+
Storage: 600 GB
Interface: Single Network interface

2. Separate Application (front-end) and Database (back-end) Servers:

- iQ:link installed centrally on an Application Server w/GIS data
- Oracle database is hosted centrally on an Oracle server or Data Center

Example Cloud Application Server (min. recommended for up to 15 concurrent iQ:link users):

Front-end (OS, iQ:link, Citrix XenApp)

Instance Type: GPU Enabled
CPU: vCPU 16 core+
RAM: 32 GB+
Storage: 600 GB
Interface: Single Network interface

Back-end (OS, Oracle Database)

Instance Type: Memory-optimized
CPU: vCPU 8 core+
RAM: 12 GB+
Storage: 128 GB
Interface: Single Network interface

Remote Access for Support

It is always recommended to provide VPN access to the iQ:link Application Server so that our Product Support Engineers can help you as quickly and efficiently as possible.