

# System Requirements

## Installation and System Requirements

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## Local Installation and Requirements

Initial application installation is included with the purchase of a license from 6connect. If modifications need to be made, we recommend contacting support prior to any changes to ensure there is no negative impact to production systems or product functionality.

### Installation Wizard

An installation wizard / script is available to install ProVision locally on Ubuntu 20 or Centos 7.

Contact support for assistance and instructions.

### Hardware Requirements

The optimum resource mix will be based on page views/refreshes. A larger concurrent user base with constant editing may benefit from additional RAM.

The minimum recommended hardware is:

	<b>Minimum</b>	<b>Recommended</b>
Processor	Dual-core Xeon class processor or equivalent	Quad-core Xeon
RAM	2GB RAM	4GB RAM
Storage	20 GB	100GB

\*Virtual instances are also acceptable. We have confirmed functionality with Citrix Xen Essentials, VMware, KVM, etc.

6connect, Inc. will support customers who run 6connect ProVision products on supported Operating Systems, irrespective of whether they are running in VMware environments or not. 6connect, Inc. supports Operating Systems, not specific hardware configurations. Accordingly, VMware operates as a hardware abstraction layer.

VMware supports a set of certified Operating Systems and Hardware, and the customer and VMware will be responsible for any interactions or issues that arise at the Hardware or Operating System layer as a result of their use of VMware.

6connect, Inc. will not require clients to recreate and troubleshoot every issue in a non-VMware environment; however, 6connect, Inc. does reserve the right to request our customers to diagnose certain issues in a native certified Operating System environment, operating without the virtual environment. 6connect, Inc. will only make this request when there is reason to believe that the virtual environment is a contributing factor to the issue.

Any time spent on investigation of problems that may, in the sole opinion of 6connect, Inc. be related to VMware, will be handled in the following fashion:

1) 6connect, Inc. will provide standard support to all 6connect ProVision products.

2) If a problem is encountered while 6connect ProVision is/are running in a VMware environment, the client may be required to recreate the problem on a non-VMware server unit, at which time 6connect, Inc. will provide regular support.

3) The client can authorize 6connect, Inc. to investigate the VMware related items at normal time and materials rates. If such investigation shows that the problem is VMware related, the client may contract 6connect, Inc. to provide a software change to resolve the issue if such a resolution is possible.

4) Regardless of the problem type or source, if the problem is determined to be a non VMware related issue - time spent on investigation and resolution will be covered as part of regular maintenance, and support will be provided as usual.

## Software Requirements

Base Software Needed (ProVision 8.0.0 +) :

	Required	Link
Operating System	Ubuntu 20.04 or Centos 7	
Apache	Apache 2.4	<a href="http://httpd.apache.org/">http://httpd.apache.org/</a>
PHP	PHP 8.0 / 8.1	<a href="http://php.net/downloads.php">http://php.net/downloads.php</a>
MySQL	MySQL 8.x	<a href="http://www.mysql.com/downloads/">http://www.mysql.com/downloads/</a>

### MySQL Triggers

ProVision does not support custom MySQL triggers at this time - please email support if you have any questions.

### MySQL Packet Size Configuration

We recommend increasing the `max_allowed_packet` setting in the MySQL configuration file to 128MB (or similar) to account for the typical dataset size handled in ProVision.

## Port Requirements

Open outbound ports 443 and port 80 for:

- license checks
- `checkip.dyndns.org` IP address validation of the machine to communicate with the licensing server

The DNS Module also supports zone checks on attached DNS Server(s) as an external user. Port 53 will need to be open and usable for ProVision to query the servers. If not, zone error checking and verification will not work as intended.

Depending on the connectors in use, there may be other port requirements needed. Port 22 (SSH) is used extensively for control of downstream devices.

## Additional Installation Options

### Enable SSL for Database Connections

Some installations may require SSL support for using database connections like MySQL, MariaDB, Azure, etc.

To create server keys and allow SSL database connections, expand the instructions below.

Follow the steps below to enable SSH for database connections:

- 1) Install MySQL (MariaDB)

2) Generate, process, and sign server keys:

```
openssl genrsa 2048 > ca-key.pem
openssl req -new -x509 -nodes -days 365000 -key ca-key.pem -out ca-cert.pem
openssl req -newkey rsa:2048 -days 365000 -nodes -keyout server-key.pem -out server-req.pem
openssl rsa -in server-key.pem -out server-key.pem
openssl x509 -req -in server-req.pem -days 365000 -CA ca-cert.pem -CAkey ca-key.pem -set_serial 01 -out
server-cert.pem
```

3) Make sure MySQL can read the keys:

```
chown mysql
```

4) Restart MySQL and check that SSL is enabled"

```
SHOW VARIABLES LIKE 'have_ssl';
```

5) Set the following constant in "[installation path]/globals.php":

```
define('DB_SSL_CA', '/etc/mysql/ssl/server-cert.pem');
```

6) If using self-signed certs, also set this constant

```
define('DB_SSL_VERIFY_CERT', FALSE);
```

7) To make sure Provision is using SSL, edit the permissions of the MySQL user account to require SSL.

## Troubleshooting:

Some potential errors and responses are listed below:

Error	Response
"Uncaught PDOException: SQLSTATE [HY000] [1045] Access denied for user"	This means the server-cert is missing or incorrect. Check the cert and defined installation path in globals.php.
"Uncaught PDOException: failed loading cafile stream"	This means cert verification failed. Check permissions, or if using self-signed certs set 'DB_SSL_VERIFY_CERT' to FALSE in globals.php.
"Uncaught PDOException: PDO::__construct(): This stream does not support SSL/crypto"	This means the connection doesn't support SSL. Most likely because you are connecting over the local socket (i.e. the \$db_host is set to localhost). Change it from localhost to 127.0.0.1 to connect over TCP/IP