IQSweb Reference C
IQSweb System and Security Requirements

The IQSweb application can be installed and configured for a variety of hosting situations based on your organization's preferences. Three basic scenarios are described below that you can select from depending on the number of machines/servers you have, whether you want to expose the application through the internet or keep it inside your intranet and how you have your firewall(s) configured. Pick the scenario that best fits your organizations Information Technology guidelines to see the requirements for security, software and hardware.

1. Installing on a Single Machine

   When the application is hosted locally on a single machine, it has to be behind the firewall on the intranet. The application must not be opened to the public because the database also resides on the same machine and if the server (machine) and the application are exposed to the public, the security risk for the data is very high.

   - **Minimum Software/Hardware Requirements:**
     - If using a Web Server
       - Microsoft Windows 2003 Server or newer.
       - IIS
       - Microsoft .NET Framework (3.5 SP 1)
       - SQL Server 2005 Express Edition
         - Processor: 600 MHz Pentium III-compatible or faster processor; 1 GHz recommended.
         - RAM: 192 MB RAM or more; 512 MB recommended.
         - CD/DVD Drive
         - Hard Disk: 1 GB minimum
         - IE 6.0 SP1 or newer
       - Crystal Reports Runtime for Visual Studio 2008

     - If not using a Web Server
       - Microsoft Windows XP with SP2.
       - IIS
       - Microsoft .NET Framework (3.5 SP1)
       - SQL Server 2005 Express Edition
         - Processor: 600 MHz Pentium III-compatible or faster processor; 1 GHz recommended.
         - RAM: 192 MB RAM or more; 512 MB recommended.
         - CD/DVD Drive
         - Hard Disk: 1 GB minimum
         - IE 6.0 SP1 or newer

- Crystal Reports Runtime for Visual Studio 2008 (Distributed with the application)

2. Installing on Multi-Server (two) environment.

   When the application is hosted in a Multi-Server environment, the application can operate on the intranet or on the internet (opened to public).

   The hosting process is the same for both scenarios with the security requirements being different.

   In the Intranet hosting, both the web server machine and the database server machine reside behind the firewall in a secured zone.

   With the Internet hosting (application being opened to public over the WWW), the web server machine resides in the DMZ (De-Militarized Zone) which is secured by a firewall and the Port 80 of the web server is open for the public requests. In this mode the database server resides behind a firewall in a secured zone and the only traffic allowed to this machine is from the web server over port 80. All the communication between web server and the database server is using web services and the communication must be encrypted using SSL (Secure Socket Layer) or IPSec (Internet Protocol Security) (Please see the assumptions). Also in this scenario the web services and the database reside on the database server. All the requests to the database are through the web services. The web server hosts the web presentation components such as the web pages, images and also the Business Objects. The database server hosts the Business Objects, web services and the database.

   - **Minimum Software/Hardware Requirements:**
     - Web Server
       - Microsoft Windows 2003 Server or newer.
       - IIS
       - Microsoft .NET Framework (3.5 SP 1)
       - Crystal Reports Runtime for Visual Studio 2008 (Distributed with the application)

     - Database Server
       - Microsoft Windows 2003 Server or newer.
       - Microsoft .NET Framework (3.5 SP 1)
       - SQL Server 2005 Express Edition
         - Processor: 600 MHz Pentium III-compatible or faster processor; 1 GHz recommended.
         - RAM: 192 MB RAM or more; 512 MB recommended.
         - CD/DVD Drive

- Hard Disk: 1 GB minimum
- IE 6.0 SP1 or newer

3. Installing on Multi-Server (three) environment.

The hosting process is the same as option #2 above except that in this scenario, the web server resides in the DMZ and the other two servers reside behind the firewall. The web server hosts the web presentation components such as the web pages, images and also the Business Objects. The Object tier is hosted on server of its own. This tier consists of the Business Objects and the web Service(s) needed to access the database. The database server hosts the database. In this mode all the requests from the web server are routed through the server hosting the object tier. There is no direct communication between the web server and the database server making the application more secure. Since the database is hosted on a separate server, IIS need not be installed on the server making it more secure and unavailable to web requests. All the communication between the middle tier server and the database server is through port 1433 of the database server. SQL Server uses port 1433 to receive data requests and send data responses. Port 1433 must be opened for communication between the server hosting the object tier and the server hosting the database. As in the above scenario all the communication between web server and the server hosting the object tier is through web services and the communication must be encrypted using SSL (Secure Socket Layer) or IPSec (Internet Protocol Security) (Please see the assumptions).

- **Minimum Software/Hardware Requirements:**
  - Web Server
    - Microsoft Windows 2003 Server or newer.
    - IIS
    - Microsoft .NET Framework (3.5 SP 1)
    - Crystal Reports Runtime for Visual Studio 2008 (Distributed with the application)
  - Middle Tier Server
    - Microsoft Windows 2003 Server or newer.
    - IIS
    - Microsoft .NET Framework (3.5 SP 1)
  - Database Server
    - Microsoft Windows 2003 Server or newer.
    - SQL Server 2005 Express Edition
      - Processor: 600 MHz Pentium III-compatible or faster processor; 1 GHz recommended.
      - RAM: 192 MB RAM or more; 512 MB recommended.
      - CD/DVD Drive
      - Hard Disk: 1 GB minimum

- IE 6.0 SP1 or newer

Assumptions

1. All the communication between the web server and the other servers is encrypted using SSL or IPSec.

For additional information on SSL, please visit
http://en.wikipedia.org/wiki/Transport_Layer_Security
For additional information on IPSec, please visit http://en.wikipedia.org/wiki/Ipsec