



## Integrated Services Website

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# Technical Prerequisites

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### Network Requirements [\(top\)](#)

BCeSIS software is based on web-enabled 3-tier architecture with a thin client presentation layer. As a result, the amount of data traffic transmitted between the application servers and client workstations is minimized. The bulk of the data transmitted from the database takes place between the database server and the application servers. Access must be available to the BC Government intranet (PLNet) or directly through an ISP to the Internet.

The Oracle 10g application server has the ability to automatically reconnect sessions after network service interruptions. Should the initial reconnect attempt fail, further reconnects are attempted until a user specified time is exceeded.

AAL recommends a dedicated T1 connection to each school with 50 or more concurrent users. For a smaller number of users, less network bandwidth is sufficient. Although a network with less bandwidth does not inhibit the operability or functionality of BCeSIS software, end users will experience longer response times. There are instances of AAL's eSIS customers operating in remote locations with a network bandwidth as low as 56kb.

### Desktop (and Laptop) Requirements [\(top\)](#)

#### 1. User Interface and Client Platforms [\(top\)](#)

BCeSIS software is implemented using an Oracle 10g database and Oracle 10g application server technology. Consequently, all BCeSIS functionality is web enabled through the Oracle 10g application server client interface Java applet. This applet is downloaded once, onto the client workstation, and runs in a browser to provide the graphical user interface. Desktops will require enough privilege to install programs locally to allow the applet to be installed. BCeSIS software cannot be used until the applet is installed; however, once installed it will provide a common look and feel across all operating environments shown in the following table.

To ensure compatibility across a broad range of browser versions, a Sun Java plug-in (ActiveX for Internet Explorer) is automatically installed into the browser so the browser's default JVM (Java Virtual Machine) is not used. Another advantage of using the client interface applet is that presentation is not dependent on HTML tags or cascading style sheets, further ensuring compatibility across different browser versions. As Oracle certifies new browsers and browser versions, BCeSIS software will be compatible with them.

The following table shows, for each operating system (OS) supported, the minimum level of browser and java plug-ins required for BCeSIS 10.1.

Client Workstation	Windows XP								Vista	Mac OS X	Mac OS X	
Browser	Firefox 1.0		Firefox 1.0.7		Firefox 2.0		IE6		IE7	IE7	Safari 1.2	Safari 2.0.3
JRE Type	Jinit	Sun Plug-in	Jinit	Sun Plug-in	Jinit	Sun Plug-in	Jinit	Sun Plug-in	Sun Plug-in	Sun Plug-in	Sun Plug-in	Sun Plug-in
Java Runtime Environment	Jinitiator 1.3.1.22	Not Certified by Oracle	Jinitiator 1.3.1.25	Not Certified by Oracle	Not Certified by Oracle	Sun Plug-in 1.4.2_06	Jinitiator 1.3.1.22	Sun Plug-in 1.4.2_06 or Oracle L3 1.5.0_06	Not Certified by Oracle	Not Certified by Oracle	SUN Plug-in 1.4.2	Not Certified by Oracle
Adobe Reader	8.0		8.0			8.0	8.0	8.0			8.0	

There are no issues running BCeSIS on MS Windows XP Home Edition; however, users may be required to download java 2 platform J2RE SE 1.4.2 if it does not already reside on their system.

The use of Linux on a desktop is not yet "approved" by aal; certification from Oracle is required. It is possible that the use of Linux on the desktop will work but it is unsupported.

#### 2. Hardware [\(top\)](#)

When determining the hardware configuration for your district please note **the recommended hardware is for workstations running BCeSIS only**. Please consider what other applications will be open (e.g. Microsoft Word, excel, Visio, Outlook, and other School District Applications) when determining the PC configuration that will best meet your needs.

BCeSIS software is accessible from Macintosh, Linux and PC computers with no change in functionality, performance, look or feel. Because BCeSIS software is cross-platform, there is not a "Macintosh version" or a "Linux version" with a different release schedule from the windows version. The following table identifies recommended configurations for PC, Mac and Linux desktop or laptop platforms. Desktop computers with faster CPUs and more memory may or may not increase the speed of BCeSIS software depending on the other applications resident on the computer.

PC Configuration - Windows XP Professional	
AAL Recommended	<ul style="list-style-type: none"> <li>• Pentium IV 2.6 Ghz</li> <li>• 512MB RAM</li> <li>• 100 Mb Network Card</li> </ul>

PC Configuration - Windows 2000 SP1 (or higher)	
AAL Recommended	<ul style="list-style-type: none"> <li>• Pentium IV 2.6 Ghz</li> <li>• 256MB RAM</li> <li>• 100 Mb Network Card</li> </ul>

  

PC Configuration - Windows 98 Second Edition	
AAL Recommended	<ul style="list-style-type: none"> <li>• Pentium IV 2.6 Ghz</li> <li>• 256MB RAM</li> <li>• 100 Mb Network Card</li> </ul>

  

Mac Configuration	
AAL Recommended	<ul style="list-style-type: none"> <li>• PowerMac G4 G5 or Intel Duo</li> <li>• 256 MB RAM</li> <li>• 100 Mb Network Card</li> </ul>

#### Printers [\(top\)](#)

BCeSIS software will print to any available printer. Printers can be located on a network or dedicated to one desktop. Reports generated out of BCeSIS software first appear on the monitor using Adobe Acrobat and then printing is initiated from there to any available printer.

#### Servers [\(top\)](#)

BCeSIS application and student records are stored in a provincial environment. There is no requirement for districts or schools to provide servers for BCeSIS application. Although networks may be in place, external network connectivity is required to connect to the application server and hence the database.

#### Handheld Devices [\(top\)](#)

Mobile Assistant is a secure and scalable micro-application that runs on almost any PalmOS hand-held device. It provides educators and administrators with the freedom to perform administrative tasks 'offline' and later synchronize their work with BCeSIS software.

Mobile Assistant integrates seamlessly with BCeSIS software via the Mobile Assistant HotSync module. This module performs bi-directional synchronization between Mobile Assistant and BCeSIS software every time the user performs a 'HotSync'. The following table outlines the supported handheld devices.

PDA	
Minimum PDA Configuration	CPU speed - 100Mhz + RAM 16MB OS PalmOS 4.0+ Hot Sync Manager 4.03+
Memory loads	Mobile Assistant - 300 KB Mobile Assistant Data - 700 KB per 1000 individuals (ie. 5000 students + 1000 staff = 42000 KB or 4.2 MB)

#### Using PLNet [\(top\)](#)

PLNet is a secure, high-speed network that connects all of British Columbia's public schools and colleges in a centrally managed 'wide area network' or 'intranet'. PLNet enables districts to communicate, exchange information and deliver learning material. PLNet provides each school with Internet access; secure data transfer capability; around the clock help-desk support; and consultative support services.

All British Columbia schools can be connected to PLNet, which provides the necessary connectivity to the BCeSIS environment. The majority of public schools are already connected to, and are using, PLNet to connect to the Ministry, other schools, and the Internet. Any institution that is not already using PLNet can sign up for the service. More details can be found on the Ministry's web site at <http://www.bced.gov.bc.ca/plnet/>