Bottomline Technologies

System Requirements

C-Series

C-Series System Requirements

Server Component

We do not recommend specific servers for use with C-Series software, but Dell PowerEdge R515 and Dell PowerEdge R715 are examples of servers that are more than adequate for running this software.

C-Series components can be installed on either physical or virtual servers, provided that each environment has the requisite licences.

Operating System

The server component is supported for use on the following operating systems:

- Microsoft Windows Server 2008 Standard or Enterprise (32-bit and 64-bit) or R2 (64-bit)

- Microsoft Windows Server 2012 Standard or Enterprise

- Microsoft Windows Server 2012 R2 Standard or Enterprise (64-bit)

> **Note**
> C-Series software does not work with 64-bit versions of SafeNet Hardware Security Modules.

Resources

The following are the minimum resources required for installing and running the C-Series software:

- 2 GHz or higher Intel Xeon or AMD Opteron processor.

- 4 GB memory.

- 20 GB minimum of available hard disk space recommended for operation, subject to data storage requirements.

  When C-Series components are installed separately, allow a minimum of 4 GB for installation of each component, and at least 1 GB after installation. Additional space may be required, depending on the number, size, and longevity of the data files used.

Databases

The following databases are supported for use with C-Series software:

- Microsoft SQL Server 2008 Standard, Enterprise, or Datacenter (32-bit or 64-bit)

- Microsoft SQL Server 2008 R2 Standard, Enterprise, or Datacenter (32-bit or 64-bit)

- Microsoft SQL Server 2012 Standard, Enterprise, or Datacenter (32-bit or 64-bit)

- Microsoft SQL Server 2012 SP1 Standard, Enterprise, or Datacenter (32-bit or 64-bit)

- Oracle 11g R2 (11.2.x) Standard or Enterprise Edition (32-bit or 64-bit)

> **Note**
>
> Oracle 11g is not supported on a Microsoft Windows Server 2012 system. If you are running a Microsoft Windows Server 2012 system, you must install the Oracle 12c client 32-bit version.

The C-Series system is a database-centric system and so proper consideration must be given to the performance of the database server. Standard database scaling measures such as clustering can be used, as long as they are transparent to the C-Series system.

The size of the database tables depends on the nature of the data and use of the C-Series system, and so it is not possible to give specific sizing recommendations. The following table shows suggested sizing guidelines for moderate to heavy use.

ADMSYSTEM	ARCHIVE	WEBSYSTEM
120 MB	4.5 GB	4.5 GB

> **Notes**
>
> - To use a SQL Server database in conjunction with C-Series software, you must install the Microsoft SQL Server Migration Assistant (SSMA) for Oracle Extension Pack 5.2, including the sysdb database, on the database server.
>
>   This software is included in the C-Series distribution media.
>
>   C-Series software supports case insensitive collation only.
>
> - If you use an Oracle database, it must include the Oracle JVM component.
>
> - If you use an Oracle database server on a different computer from the C-Series Application Server component, you must install the Oracle client on the Application Server host. The Oracle client and server must be the same version, but the Oracle client must be a 32-bit version.
>
> - The Direct Debit Management module is not supported for use with an Oracle database.

Installed Software

The following software must be installed before starting a C-Series installation:

- Microsoft .NET Framework 3.5 SP1.

  You must install the .NET Framework on the machine on which you plan to install the Application Server component.

> **Note**
>
> Microsoft .NET Framework 4.0 is also required on the Application Server host. If this is not present, it is installed as part of the C-Series installation.

- A database management system (DBMS).

  See *Databases* on page 2 for more information.

SMTP Server

During the C-Series installation, you are asked to specify the name or TCP/IP address of an SMTP server to use for routing email notifications. It must be possible to connect to this server from the machine on which the Application Server component is installed. If you want the C-Series system to send email notifications, make sure you have details of the SMTP server before you start the C-Series installation.

Single Sign-On

You can enable the C-Series system to use Active Directory credentials for authenticating users of the client application. Doing this means that client users do not have to maintain separate passwords for accessing C-Series features.

To enable this single sign-on feature, Microsoft Internet Information Services (IIS) must be installed on the machine on which the Web Server component is installed. During IIS installation on a Windows 2008, Windows Vista, or Windows 7 system, select the options to install the following role services:

- **Application Development**
  - **ISAPI Extensions**
  - **ISAPI Filters**
- **Security**
  - **Windows Authentication**

If IIS is not present when you install the C-Series system, you can install and configure it later.

Secure Sockets Layer

During C-Series installation, you can choose to force the use of the Secure Sockets Layer (SSL) protocol for connections to the C-Series web sites. If you select this option, the installation procedure creates a self-signed certificate, which is valid for 12 months.

If you wish to use SSL, it is your responsibility to obtain an SSL certificate from a trusted authority such as Verisign (www.verisign.com) or Thawte (www.thawte.com).

Outbound Connections

To use external services such as the Bacs payment service, the Application Server host machine must be able to connect to the relevant service providers using either HTTP on port 80 or HTTPS

on port 443.

The following table shows the connections that may be required.

Service	IP Address[1]	URL
Bacs payment service (internet)	194.61.123.9	paymentservices.bacs.co.uk
Bacs payment service (fixed extranet)	194.61.122.17	paymentservices.extranet.bacs.co.uk
Faster Payments Service	194.61.123.21	iplservices.voca.com
EISCD updates	91.151.213.76	bottomline.co.uk/iscd/WBEISCDH.zip
Outsource cheques	69.84.94.144	sftp01.ts.emea.bottomline.com
SMA SWIFTAlliance Service Bureau	See your Bottomline representative for details of connectivity options.	

Client Component

Operating System

The client component is supported for use on the operating systems supported for the server component, plus the following operating systems:

- Microsoft Windows Vista Business (32-bit)
- Microsoft Windows 7 Professional (32-bit and 64-bit)

Browsers

The following web browsers are supported.

- Microsoft Internet Explorer 8 (32-bit running in Compatibility Mode)
- Microsoft Internet Explorer 9 (32-bit running in Compatibility Mode)
- Microsoft Internet Explorer 10 (32-bit running in Compatibility Mode)
- Microsoft Internet Explorer 11 (32-bit running in Compatibility Mode)

> **Note**
>
> Some parts of the C-Series system require Internet Explorer 8 or 9 browsers to be set to compatibility mode.

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[1]Correct at the time of writing. IP addresses are subject to change.

Third-Party Products

The following table shows the third-party products that are included in the C-Series installation.

Product	Description
Adobe Reader X	Enables PDF files to be viewed and printed.
Crystal Reports Server Embedded 2008	Report and dashboard management software.
Dojo 1.3.0	JavaScript tools.
Install4j 5.08	Cross-platform Java installer.
JBoss Application Server 5.1	Java EE services.
JQuery 1.4.2	JavaScript library.
JSON (JavaScript Object Notation)	A lightweight data-interchange format.
Microsoft .NET 4	.NET framework.
Microsoft Visual C++ 2010 Redistributable	Runtime components of Visual C++ that are required to run applications developed with Visual C++ 2010.
MicroQuill SmartHeap 6.0.2.22	`malloc/operator new` library.
NHibernate (.NET) 3.3.1.4000	An object-relational mapper for the .NET framework.
OpenRasta 2.0.3	A .NET framework.
Rogue Wave SourcePro® C++ 10 Update 1	Enterprise C++ components that create portable code across operating systems, databases, and communication protocols.
SoftArtisans FileUp™ 3.1.1.2	File transfer software.
SoftArtisans XFile 2.4.1	File transfer software.
Sun Microsystems JDK 6.0.18	Java Development Kit.
Tanuki Software Java Service Wrapper 3.2.3	Enables Java applications to be run as Windows services.
Zip4j 1.2.9	A Java open-source library to handle zip files. Zip4j is released under the Apache licence Version 2.0. For more information, see http://www.lingala.net.

Product	Description
Stimulsoft Reports.Net 2008.1	Letter production in the Direct Debit Management module.
Apache Libraries 6.0.20	
Axis 1.5	Simple Object Access Protocol (SOAP) engine.
Castor 1.3.1	XML binding tool.
Commons Collections	Collection-handling library.
Commons DBCP	Database connection pool.
Commons Discovery	Locates implementations for pluggable interfaces.
Commons Logging	Bridge between different logging implementations.
Commons Pool	Object-pooling API.
DdlUtils 1.0	Component for working with Database Definition files.
Geronimo Activation 1.1	Implements content handlers for use in conjunction with the Java Activation Framework.
Geronimo JavaMail 1.4	Email provider.
Geronimo JMS 1.1	Java Messaging Service client.
I18n	Localization package.
Jakarta ORO 2.0.8	Text processing classes.
Jakarta Regexp 1.5	Regular expression package.
Log4J	Logging package.
Struts	Framework for creating Java web applications.
Tuscany	Infrastructure for service-oriented architecture development and management.
Xerxes	XML parsers and related software components.