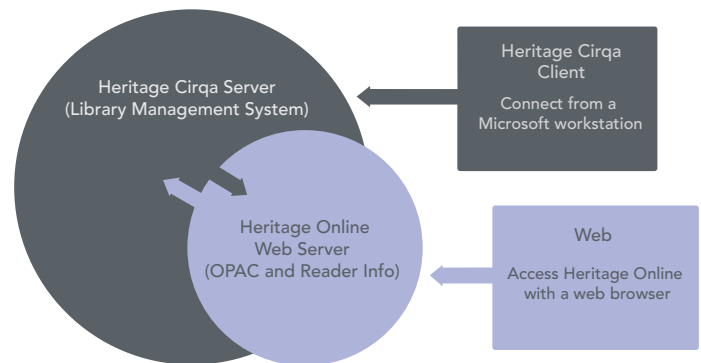


Heritage Cirqa Technical Information

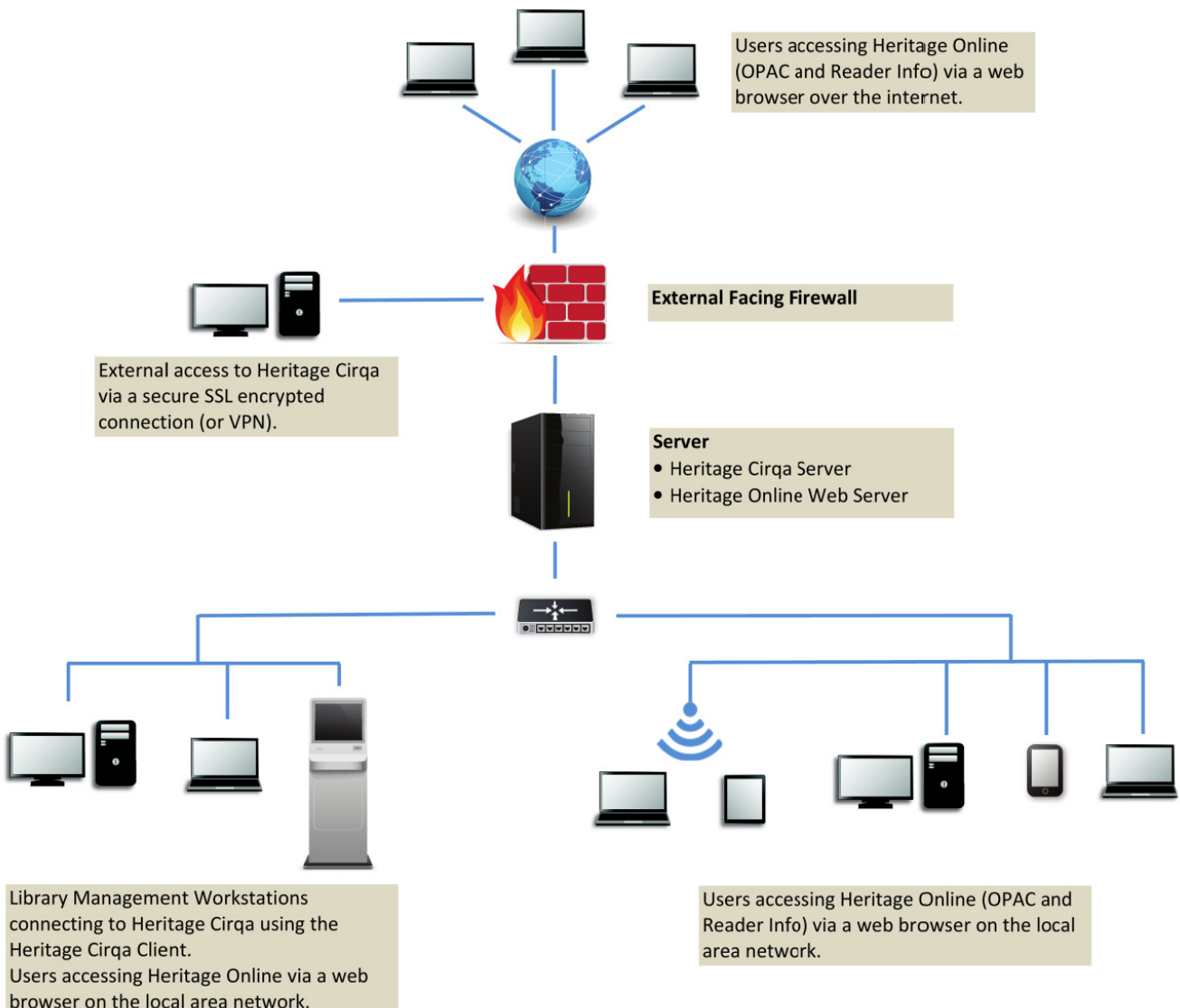
There are four main components to the Heritage Cirqa system:

- **Heritage Cirqa Server:** The library management system (LMS) including programs, settings and database.
- **Heritage Cirqa Online:** The web server for Heritage Cirqa's OPAC and Reader Account Information.
- **Heritage Cirqa Client:** Used to manage and operate the Heritage Cirqa server from a Microsoft Windows workstation either locally or via the internet.
- **Web Access:** Users access Heritage Online using a web browser from any compatible platform or device.



In most installations, the Heritage Cirqa server and the Heritage Online Webserver are run on the same machine. Some institution policies will require the Heritage Cirqa Server to be inaccessible from an external network, and so the Heritage Cirqa Server and the Heritage Online Webserver can also be placed on two machines on separate subnets.

A Typical Heritage Cirqa System Installation



Putting Your Heritage Cirqa in the Cloud

IS Oxford offer a reliable and secure Heritage Cirqa Hosting Service. Have your Heritage Cirqa server and Heritage Online hosted in a highly secured datacentre within the UK and managed by a team of Heritage Experts. Here are some of the key benefits:



Rapid patching and updates: With direct access to hosted systems, our support team is often able to patch or update Heritage Cirqa installations at a mutually agreed time before updates are made publicly available and often without interruption to the customer.



Better support access: When a customer reports a problem, resolution times are often around three times quicker due to our support team having direct access to and familiarity with their hosted system. Furthermore, any requirement to involve local IT staff is minimised, because our support team can be the first port of call.



Strong system security: Keeping customer systems safe and secure is of prime importance to us. Heritage Cirqa hosted servers are located in a highly secured datacentre here in the UK. With heavily restricted physical access, strong firewall protection, IP address filtering and tight access policies, we offer a very high level of protection. We use Windows Server 2012R2 (Server Core Edition) for extra security, efficiency and with regular OS updates and active Virus Protection for complete peace of mind.



Sophisticated and robust backups: Heritage Cirqa hosted systems are supported by a sophisticated backup facility with two independent procedures which include the following functions: off-site backup, 256 AES encryption, validation checks and automated failure notification. We know exactly which folders and files require backing up and retain multiple copies through time, so we are almost certainly able to restore data required by the customer from any point in the previous 12 months.



Automated monitoring: We have dedicated staff assigned to each hosted system. Automated monitoring and notification alerts are brought to our attention within minutes of a system not behaving properly and our team can fix problems quickly, often before the customer even knows they have occurred. Some examples from the past twelve months include runaway banded reports, services requiring a restart, web filtering, data corruption and 'lookup' issues.



Consistent service: Hosted customers are supplied with their own dedicated virtual server and enjoy the benefits of single-purpose servers, devoted purely to running Heritage Cirqa and Heritage Online. There is no conflicting software, no unnecessary upgrades, no server relocation or redeployment. We guarantee 99% server uptime and a maximum of 3 working hours of unscheduled system downtime per year.

Visit www.isoxford.com/hosting for more information.

Heritage Cirqa Server



The Heritage Cirqa server is the backbone to the Library Management System and needs to be reliable, secure and with strong monitoring and backup systems. System down-time needs to be kept to a minimum and access (whether physical or remote) to this server should be strictly limited. As such, IS Oxford recommends that your Heritage Cirqa server be single-purpose, dedicated to your Heritage Cirqa System. Many customers are finding that IS Oxford's hosting service provides a more reliable and secure service than they could deliver if hosted on-site.

Minimum System Requirements:

- Either a physical or virtual Server
- Windows Server: 2008R2 or newer
- IIS 7.5 or newer
- From 1Gb free hard disk space depending on the size of your catalogue and associated files (approximately 20Mb per 1,000 catalogue records)
- 2Gb RAM
- 2 processor cores

Heritage Cirqa can co-exist with other database systems such as SQL as it comes with its own unique database system.

Heritage Cirqa can be run on virtualised hardware; particularly desirable if it allows Heritage Cirqa to be installed on its own dedicated server.

Heritage Cirqa Server Licensing:

Heritage Cirqa licensing is based on concurrent access. A distinction is made between full access licences and Heritage Online licences.

Full licences provide access to all Heritage Cirqa functions for those with the appropriate security level. One full licence is provided as part of the core Heritage Cirqa software, so if, for example, a library required five concurrent staff licences they would only need to purchase four additional full licences.

Additional user licences can be purchased at any time if required.

Minimum Windows Features Required:

Web Management Tools	IIS Management Console
Common HTTP Features	Default Document
Security	Request Filtering Basic Authentication Windows Authentication
Application Development	.NET Extensibility 3.5 ASP.NET 3.5 CGI ISAPI Extensions ISAPI Filters
.NET Framework 3.5 Features	.Net Framework 3.5 (includes .NET2.0 and 3.0)
.NET Framework 4.5 Features	.NET Framework 4.5 ASP.NET 4.5 WCF Services TCP Port Sharing



This is usually the same computer as the Heritage Cirqa server above. If you require a different server for your external facing webserver, the following is required to run the Heritage Online Webserver.

Minimum Windows Features Required:

Common HTTP Features	Static Content Default Document
Application Development	ASP.NET .NET Extensibility ISAPI Extensions ISAPI Filters
Security	Request Filtering
Web Management Tools	IIS Management Console
.NET Framework 3.5 Features	.Net Framework 3.5 (includes .NET2.0 and 3.0)
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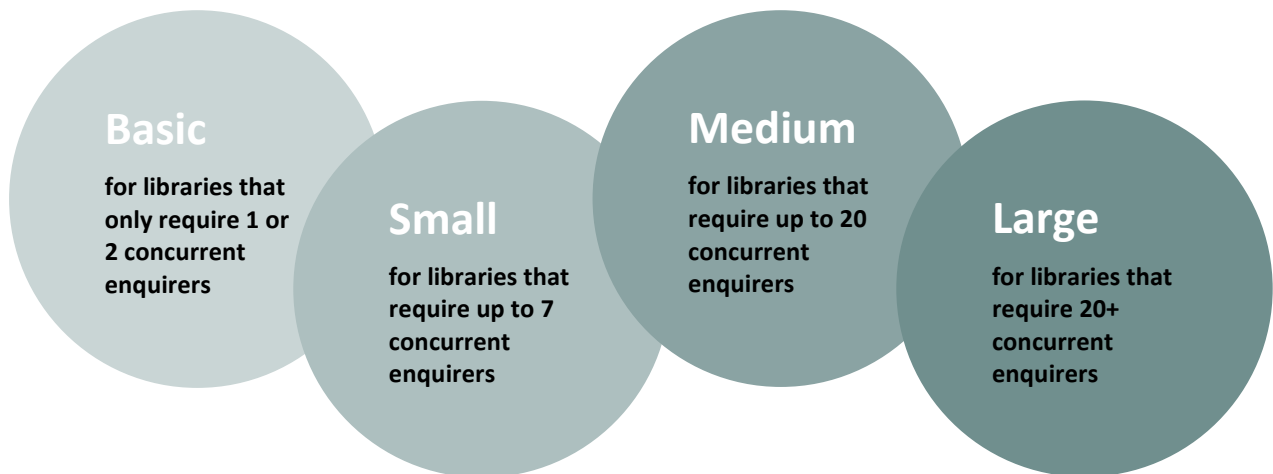
Minimum System Requirements:

- Either a physical or virtual Server
- Windows Server: 2008R2 or newer
- IIS 7.5 or newer
- From 1Gb free hard disk space depending on the size of your catalogue
- 1Gb RAM

The IIS App Pool used for the Heritage Online website requires .NET 2.0 and 32bit applications enabled.

Heritage Online Licensing:

Heritage Online has four different licensing options:



NB. The licensing arrangements for Schools using Heritage Online are slightly different. Please contact sales@isoxford.com for further information.

Unlike the licensing arrangements for Heritage Cirqa, Heritage Online will not prevent access to additional enquirers over and above the suggested number of concurrent accesses. Instead it will offer a slower search facility for those users. This would be acceptable if, for example, a library normally only had a handful of concurrent enquirers but ran induction courses occasionally, where there might be significantly more concurrent users than normal. In a teaching situation the speed of retrieval would be less important, and it prevents the library having to upgrade to a larger configuration just to cater for these odd occasions.

Heritage Online contains logs that provide information about the number of concurrent enquirers that have been using the system, so libraries can regularly check that they are offering the correct configuration (it is possible to upgrade to the next level at any time).



Accessing the OPAC via a web browser

To access your Heritage Online OPAC, all you need is a web client and an internet connection. Heritage Online from version 3.6 is designed to work across computers, phones and tablets.

Minimum System Requirements:

Heritage Online 3.6's web interface is built and tested to run on the five main web browsers:

- Firefox 3.5 +
- Google Chrome 6 +
- Safari 5 +
- Internet Explorer 9 +
- Opera 10 +

Browsers need to have JavaScript enabled

Due to security and correct functionality, our preferred browsers are the latest versions of Internet Explorer, Firefox or Google Chrome.



Accessing the Heritage Cirqa Server via the Heritage Cirqa Client

The Heritage Cirqa Client is required in order to manage the Heritage Cirqa server and provides a powerful tool for managing your Library Management System.

The Heritage Cirqa Client uses proprietary software created by IS Oxford which comes with its own installer and will run on any windows version from Windows XP and Windows Server2008.

The Heritage Cirqa Client can be run under Terminal Services or Citrix if required.

Minimum System Requirements:

- Windows: Vista or newer, or Windows Server: 2008 or newer
- 2Gb RAM
- From 1Gb free hard disk space

Other Hardware

Barcode Readers

Heritage Cirqa will work with any barcode reader that will read your barcodes in to Windows Notepad or Word. Barcode labels and scanners can be obtained through IS Oxford, including wireless scanners and stocktaking units. All our scanners are code 39 compliant and barcodes are printed on polyester labels.

Biometrics

IS Oxford can supply biometrics hardware to operate with Heritage and Heritage Cirqa. The software for this is supplied by Biostore Ltd. and is used by a number of other system suppliers. This means that the biometrics data need only be entered once to be used for multiple applications. Biostore must be purchased and installed separately and will have its own system requirements.

Backups

Heritage Cirqa installs to a single folder on the fileserver and likewise on the webserver. Backing up can be carried out using conventional Windows backup software.

Self-service Hardware and RFID

Heritage Cirqa works with all the main suppliers of self-service hardware (and RFID). These use the optional Heritage Self-service module.

Interoperability

Heritage Cirqa can integrate with other systems and we have developed a number of modules and services to improve inter-operability. These include, but are not limited to the following:

Integration with User Management Systems:

- Active Directory - for creating borrower records, validating borrowers for self-issue and identifying them to Heritage Online. It is also used for single-sign-on in Heritage Online in non-hosted systems.
- Shibboleth and LDAP - these can be integrated with Heritage for single-sign-on with Heritage Online.
- Managed Learning Environments (MLE) and Virtual Learning Environments (VLE). Heritage Online has been successfully integrated with Blackboard, Moodle, SharePoint and others.
- Heritage Connect - links to other systems to retrieve data (e.g. borrower records from administration databases) (N.B. Not required if IS Oxford host your system.)

A number of other export facilities, including XML, CSV or MARC formats are also available. Overdues information, letters and reports can be sent by email or output in RTF or HTML formats.

Heritage Online & Virtual Learning Environment's (VLE)

Heritage Online is able to serve XML data about individual readers for third party applications such as Moodle and Microsoft SharePoint. The intention of this facility is to allow reader specific information such as current loans and overdue items to be displayed when a user logs in to their VLE.

Integration with Other Library Systems:

- Heritage Self-Service - uses the SIP2 protocol to integrate with self-issue systems
- Inter-Library Loans - for managing British Library ILLs (amongst others)

Other Considerations

Network:

Whether using a Hosted Heritage Cirqa Installation, or a local one, the network bandwidth required for normal operation is minimal and will happily work on a 100Mbps LAN network or a 2Mbps internet connection.

Below are the default ports used by Heritage Cirqa, however, all ports are configurable.

- | | |
|------------------------------|---------------------|
| • Heritage Cirqa Client | ports 80 and/or 443 |
| • Heritage Online | 80 and/or 443 |
| • Self Issue Machines (SIP2) | 6001 |
| • File Transfer (FTPs) | 21 and 50000-50010 |

Proxies and Web Filtering:

Cirqa is designed to work through or around proxy servers. However, some web-filtering (such as Websense or Fiddler) can often hamper or interrupt the operation of the Cirqa System and planning an alternate route around the web filtering will be important.

Quality of Service (QoS) and Network Prioritisation:

Although the bandwidth requirement of the Cirqa System is very low, on a heavily-used network you may need to increase the priority of traffic to and from your Cirqa Server above your normal network traffic.



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