Brainware Intelligent Capture

Technical Specifications

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About the Brainware Intelligent Capture Technical Specifications

Brainware intelligent Capture (BIC) is a Hyland product suite that automates the processing of incoming documents. BIC automatically classifies these documents, extracts meaningful information, and exports that data for use by other systems. BIC works with any document that is electronically available, including scanned images, e-mails, files, and faxes.

This document provides the technical specifications for BIC.

Use the requirements provided in this document as a guideline. The actual hardware and software configuration depends on your specific requirements.

About BIC Server Requirements

The primary BIC server powers the BIC processes such as licensing, OCR, classification, and extraction. All BIC servers require a server-class system to run in a production environment.

The requirements do not include any amount of memory or disk space you require for the operating system, environment, or other software that runs on the same machine. In addition to the recommended disk space, we recommend hot swappable hard drives and the use of RAID controllers.

Minimum hardware recommendations vary based on the number of daily processed documents. If your daily volume exceeds 10,000 pages, contact your Hyland representative for recommendations.

For all software and operating systems listed, we recommend using the latest patch version.

The recommendations in this guide are based on a standard accounts payable project with the following properties.

- 1-3 page TIFF documents
- Document resolution of 300 dpi
- Average TIFF file size of approximately 80 KB
- Average WorkDoc size of approximately 21 KB
- A project size of less than 5 MB and less than 10 document classes
- Cleanup of exported batches within 1-3 days

Server Requirements

The following table lists the minimum requirements for BIC servers.

Specification	Servers processing up to 500 pages per day	Servers processing up to 5,000 pages per day	Servers processing up to 10,000 pages per day
Processor	As a minimum requirement, use a dual core processor running at 3 GHz.	As a minimum requirement, use a quad core processor running at 3 GHz.	As a minimum requirement, use a 8 core processor running at 3 GHz
Memory	Minimum 4 GB, 2 GB per core	Minimum 8 GB, 2 GB per core	Minimum 16 GB, 2 GB per core
Disk space	20 – 40 GB	100-200 GB	Minimum 200 GB

Additional Server Requirements

The following table lists the additional requirements for BIC servers.

Specification	Description
Operating Systems	- Microsoft Windows Server 2012 R2 - Microsoft Windows Server 2016
Software	Microsoft .NET Framework 4.6
Network	A 100 MB/s network, configured at full duplex or auto-negotiate. We recommend a 1 GB/s network to provide optimal performance.

BIC Database Server

The BIC database stores the data and processed documents. We do not recommend the use of network attached storage (NAS) devices.

The following table lists the minimum technical specifications required for BIC database servers.

Specification	Description
Hardware	As a minimum requirement, use a quad-core processor running at 3 GHz.

Specification	Description
	Hardware requirements specified by respective DBMS vendors are necessary in addition to BIC-specific requirements. We recommend installing the database on a separate server.
Memory	Minimum 8 GB
Disk Space	Minimum 100 GB
Operating Systems	- Microsoft Windows Server 2012 R2 - Microsoft Windows Server 2016 We provide support for ODBC and web services as they relate to Microsoft Windows Server OS. However, you can use any server OS that allows database connectivity through ODBC and web services, such as REHL, AIX, and Solaris. A non-Windows server OS must provide the same level of functionality for ODBC and web services.
Software	Microsoft .NET Framework 4.6
DBMS	- Microsoft SQL Server 2014 SP2 or newer - Microsoft SQL Server 2016 SP1 or newer - Microsoft SQL Server 2017 - Oracle 12c R2 - Oracle 19c If you use Oracle as a database, you must install a 32-bit Oracle client on any workstation or server where BIC communicates with the database, such as when using Designer or Verifier.
Network	A 100 MB/s network, configured at full duplex or auto-negotiate. We recommend a 1 GB/s network to provide optimal performance.

Web Verifier Server

The following table lists the minimum technical specifications required for Web Verifier servers.

Specification	Description
Hardware	We recommend installing Web Verifier server on a dedicated server. Minimum hardware recommendations vary based on the number of concurrent supported users. As a minimum requirement, for 2-4 users, use a quad-core processor running at 3 GHz, plus 1 additional core for every 2 additional concurrent users.
Memory	Minimum 4 GB for 2-4 users plus 500 MB for each additional user
Disk Space	Minimum 50 GB Minimum 30 GB for the operating system
Operating Systems	• Microsoft Windows Server 2012 R2 • Microsoft Windows Server 2016
Software	• Microsoft .NET Framework 4.6 • Internet Information Services (IIS)

About Virtual Machines

Hyland supports running BIC products on the named operating systems, regardless of whether the system runs in a virtual environment, such as VMWare, Microsoft Hyper-V or Amazon EC2. Unless otherwise noted in this document, we support specific operating systems, web server configurations, and web browsers – not hardware configurations. Virtual platforms operate on, and interact with, the hardware abstraction layer provided by the virtual platform vendor.

The virtual platform vendor supports a set of certified operating systems and hardware. Hyland is not responsible for any interactions or issues that arise at the hardware or operating system level because of the virtual platform vendor.

In virtual environments, BIC supports virtualization but not paravirtualization.

About BIC Client Requirements

A BIC system includes several clients and a BIC server. The following sections provide the technical specifications for each client application.

Designer

The Designer client creates and maintains BIC projects and applications. Designer does not require a separate desktop system, and typically runs on the same machine as the BIC server.

The following table lists the minimum technical specifications required for this client.

Specification	Description
Hardware	As a minimum requirement, use a one-core processor running at 2.4 GHz. The required minimum screen resolution is 1024 x 768. We recommend 1280 x 1024 SVGA.
Operating Systems	• Microsoft Windows 10
Software	Microsoft .NET Framework 4.6
Network	A 100 MB/s network, configured at full duplex or auto-negotiate. We recommend a 1 GB/s network to provide optimal performance.
Memory	Minimum 1 GB in addition to the memory recommended for the operating system
Disk Space	Minimum 40 GB
DBMS	When using Oracle for the BIC DBMS, you must install a 32-bit Oracle client on every desktop that runs a Designer client.

Verifier

The Verifier client is the quality assurance component of the BIC system. Verifier allows users to perform data verification, Advanced Verifier operations, and learn set management.

The following table lists the minimum technical specifications required for Verifier.

Specification	Description
Hardware	As a minimum requirement, use a one core processor running at 2.4 GHz. The required minimum screen resolution is 1024 x 768. We recommend 1280 x 1024 SVGA.
Operating Systems	• Microsoft Windows 10
Software	Microsoft .NET Framework 4.6
Network	A 100 MB/s network, configured at full duplex or auto-negotiate. We recommend a 1 GB/s network to provide optimal performance.
Memory	Minimum 1 GB in addition to the memory recommended for the operating system.
Disk Space	Minimum 40 GB
DBMS	When using Oracle for the BIC DBMS, you must install a 32-bit Oracle client on every desktop that runs a Verifier client.

Web Verifier Client

Web Verifier is the web-based version of the Verifier client, and does not require a separate workstation.

The following table lists the minimum technical specifications required for this client.

Specification	Description
Hardware	As a minimum requirement, use a dual-core processor running at 2.0 GHz. The required minimum screen resolution is 1024 x 768. We recommend 1280 x 1024 SVGA.
Operating Systems	• Microsoft Windows 10
Web Browsers	• Internet Explorer 11 • Google Chrome
Network	A 100 MB/s network, configured at full duplex or auto-negotiate. We recommend a 1 GB/s network to provide optimal performance.
Memory	Minimum 2 GB in addition to the memory recommended for the operating system
Disk Space	Minimum 40 GB

RTS Remote Admin Client

The Remote Admin client manages the Runtime Server (RTS). This client does not require a separate workstation. It typically runs on a BIC server or any network-accessible system where the Microsoft Management Console is available for the RTS Remote Admin snap-in.

The following table lists the minimum technical specifications required for this client.

Specification	Description
Hardware	As a minimum requirement, use a one-core processor running at 2.4 GHz. The required minimum screen resolution is 1024 x 768. We recommend 1280 x 1024 SVGA.
Operating Systems	• Microsoft Windows 10
Software	• Microsoft .NET Framework 4.6 • BIC RTS Remote Admin MMC Snap-in
Network	A 100 MB/s network, configured at full duplex or auto-negotiate. We recommend a 1 GB/s network to provide optimal performance.
Memory	Minimum 1 GB in addition to the memory recommended for the operating system.
Disk Space	Minimum 40 GB

About Verifier Clients Using Citrix or Terminal Services

The BIC core applications are not designed to work with any specific desktop presentation platform. You can use third party products like Citrix and Microsoft Terminal Services. However, you are responsible for providing, configuring, and supporting the environment.

Transport Layer Security (TLS)

BIC supports TLS 1.2.

Scripting Component

BIC supports WinWrap version 9.0.0.56.

BIC Development and Test Environments

In addition to the production server environment, we recommend a development and test environment. A typical development or test environment consists of a single server capable of processing up to 500 pages per day.

The following table lists the minimum technical specifications for a system that houses BIC server, Web Verifier server, and BIC database server.

Specification	Description
Hardware	As a minimum requirement, use a quad-core processor running at 3 GHz.
Memory	Minimum 8 GB
Disk Space	Minimum 100 GB
Operating Systems	- Microsoft Windows Server 2012 R2 - Microsoft Windows Server 2016
Software	- Microsoft .NET Framework 4.6 - BIC RTS Remote Admin MMC snap-in - Internet Information Services (IIS)
DBMS	- Microsoft SQL Server 2014 SP2 or newer - Microsoft SQL Server 2016 SP1 or newer - Microsoft SQL Server 2017 - Oracle 12c R2 When using Oracle as a database, you must install a 32-bit Oracle client on any workstation and server where BIC communicates with the database, for example, when using Designer or Verifier.

Supported Email Clients

The email service provided within BIC is compatible with the following email clients, but has limited future support. For a more robust system, we recommend using **OnBase Capture with Email Importer** for this capability instead.

- Microsoft Outlook 2013 32-bit
- Microsoft Outlook 2010 32-bit

ABBYY FineReader

BIC is compatible with the following versions of ABBYY FineReader.

- ABBYY FineReader 11
- ABBYY FineReader 10

Barcodes

The following barcodes are supported by QualitySoft

- BCD Matrix
- Code 32
- Code 39
- Code 39 extended
- Code 93
- Code 128
- Codabar
- Codablock
- Datalogic 2 of 5
- Datamatrix
- EAN 8
- EAN 13
- EAN/UCC128
- Iata 2 of 5
- Industrie 2 of 5
- Interleaved 2 of 5
- Inverted 2 of 5
- Matrix 2 of 5
- Patchcode
- PDF 417
- UPC-A
- UPC-E

UI Languages

The following table lists the available UI languages for each BIC application. This does not pertain to the Verifier form itself. Localization support of the Verifier form in other languages requires custom services.

Language	Designer	Verifier	Web Verifier
Chinese (Simplified)			Yes
Chinese (Traditional)			Yes
Danish			Yes
Dutch (Dansk)			Yes
English	Yes	Yes	Yes
Finnish (Suomi)			Yes
French		Yes	Yes
German (Deutsch)	Yes	Yes	Yes
Italian			Yes
Japanese			Yes
Korean			Yes
Norwegian			Yes
Polish			Yes
Portuguese (Brazilian)			Yes
Romanian			Yes
Russian			Yes
Spanish			Yes
Swedish			Yes
Turkish			Yes

Network Port Usage

BIC and its related products use specific network ports as part of the default implementation. If needed, you can modify port assignments. The following table lists the Internet Assigned Number Authority (IANA) for networking protocols. It is possible that your networking group has changed ports for LDAP, SMTP, POP3, or for database traffic to meet your organization's security requirements.

> **Note:**
>
> For integrations with ERP solutions, consult with your Hyland representative for information on the ports that Brainware requires and uses.

Port	Usage
110	RTS - incoming email (POP3)
50607	RTS - instances
3000	ABBYY FineReader 10 Network License Manager
3011	ABBYY FineReader 11 Network License Manager
1433	Microsoft SQL Server database
1521	Oracle database

About Firewalls

BIC requires a non-encapsulated LAN environment without firewalls or other traffic-filtering devices.

About System Level Admin User Requirements

Some BIC applications and users, including internal accounts, may require the user account involved to have local system admin level access. Below are the known situations that you need to be aware of.

- **BIC Service Manager** (internal service account)

  This account should be a member of the Local Administrators Group. This is needed to start and stop services and add RTS instances .

- **BIC Designer**

  All users accessing this application need local system admin access.

Considerations for BIC

When sizing the hardware for a production environment, consider the following factors.

- Input volume: The number of documents and pages to process on a daily basis.
- Completion time: The time required from scanning the document in to the time required to exporting the document out of the system.
- Complexity of input documents: Includes single or multi-page TIFF, scanning resolution, document size, number of OCR pages per document.
- Output requirements: Includes data extraction, validation, export, and number of documents processed per day.
- Complexity of workflow customization: This includes, but is not limited to scripting.
- Third-party software integration requirements: Includes third-party software such as Oracle, Oracle Financials, JD Edwards, SAP, Microsoft Dynamics, Lawson, and ECM and CRM systems.
- Disaster recovery: Includes backup, fault tolerance and up time.
- Room for growth: Includes increasing input and output and other system requirements.
- Number of concurrent users: Includes the number of users for Verifier and Web Verifier.
- Batch retention time: Retention time for a batch of documents in the system after export.
- Number of projects: Number of BIC projects per country and per solution.
- Installed components: Other components such as Visibility or databases. For a production environment, we recommend to install these software products on separate servers.
- Network: Network operating system platform and network environment.