Organice System Requirements for SharePoint 2013

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Document History

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About Us

Cadac Organice is a software suite for engineering document management and document control and is fully based on Microsoft SharePoint. Cadac Organice helps project-driven organisations to manage their (project) documents and to control their document distribution and tracking. Cadac Organice is easy to use, is instantly accepted by all users and immediately improves the business process and results of project-driven organisations. For more information, please visit https://www.cadac.com.

Disclaimer

1 Introduction

1.1 Purpose of This Document

The Organice System Requirements document presents all components required to create an Organice SharePoint environment. Please note that the requirements in this document are based on Cadac experience, and are represented as **<u>minimal</u>** components required.

This document describes the SharePoint farm configuration, the required components and their corresponding versions. For more information about a specific solution in terms of functionality and release notes, please consult the corresponding solution documentation.

2 Minimal Physical/Virtual Server Requirements

This chapter contains all minimal server requirements that are needed to run Organice solutions. These requirements are based on the product Microsoft SharePoint, Cadac Organice products and experience on existing implementations.
The servers can run on physical as well as virtual machines. The requirements discussed below are applicable to both types.

Note: It is always recommended to upscale components when available/needed for better performance.

2.1 Server Overview

All required servers and their role are displayed in the overview below.

BRAVA
Brava server

SQL
Database server

BLAZON
Blazon server

WFE
SharePoint
Web Frontend server

APP
SharePoint
Application server

SEARCH
SharePoint
Search server
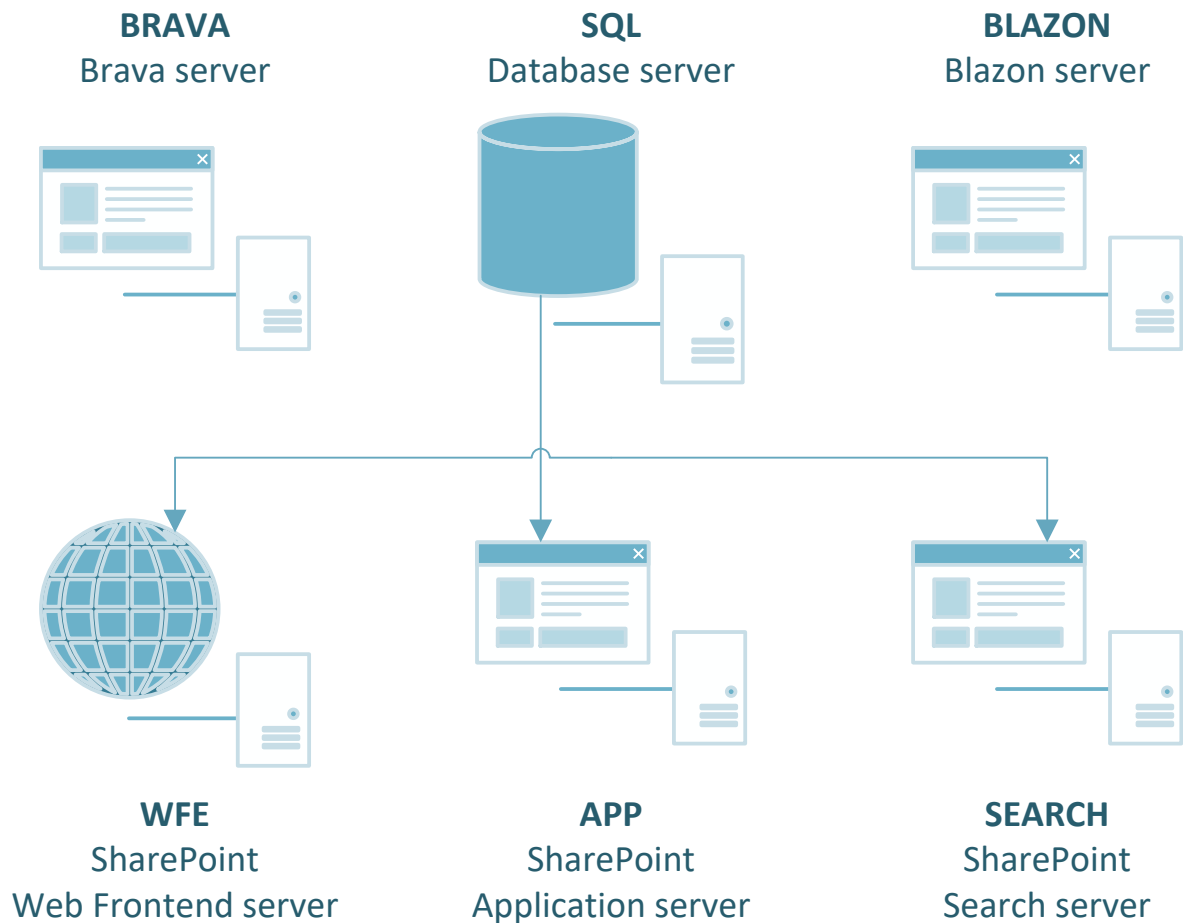
2.2 Production Environment Specifications

The production environment consists of the following servers:

- **SharePoint Web Frontend server (WFE):** this server is used for connecting the clients to SharePoint.
- **Organice Application server (APP):** this server runs all SharePoint timers as well as all Organice solution timers. This server also runs the SQL Server Reporting Service (Integrated SSRS) to generate reports.
- **SharePoint Search Server (Search):** this server is used to process search crawls and indexing.
- **Brava! for SharePoint server (Brava):** this server runs the Brava! application acts as a Job Processor and hosts the Brava! License service. It converts and shows any file that is requested through SharePoint via the Brava Viewer.
- **Blazon server (Blazon):** this server is used for publishing document and image files on-demand by users and can monitor Document Libraries for new files that are uploaded.
- **Microsoft SQL Server (SQL):** this server contains the Microsoft SQL Server software and hosts the Organice and SharePoint content databases. It also functions as a Native SQL Server Reporting Service (Native SSRS).

In the table below are the specific hardware requirements per server:

Server name	Role	Disk size (in GB)	CPU count	Memory/RAM (in GB)
WFE	SharePoint Web Frontend Server	80	4	16
APP	SharePoint Application Server	120	4	16
Search	SharePoint Search Server	120	4	16
Brava	Brava Server + Job Processor	120	2	8
Blazon	Blazon Job Server	120	2	8
SQL	SP Databases + Native SSRS	2x 120	4	24

2.3 Test Environment Specifications

The test environment in terms of the composition is the same as the production environment, but with fewer system resources, since only a limited amount of users are testing in this environment.
It is strongly advised to keep the test environment identical to the production environment. Changes, upgrades and 3rd party software should be applied to both environments, in the order:
Test → Production.

In the table below are the specific hardware requirements per server:

Server name	Role	Disk size (in GB)	CPU count	Memory/RAM (in GB)
WFE	SharePoint Web Frontend Server	80	2	8
APP	Organice Application SP Server	120	4	8
Search	Search SP Server	120	4	8
Brava	Brava Server + Job Server	120	2	4
Blazon	Blazon Job Server	120	2	4
SQL	SP Databases + Native SSRS	2x 120	4	16

3 Minimal Software Requirements

This chapter describes what software is required on the hardware specified in the previous chapter, and discusses the following types of software grouped by vendor:

Microsoft
- Server Operating System (OS)
- SharePoint
- SQL Server

Cadac
- Organice Server Solutions
- Organice DCS Server Solutions
- Organice Process System (Workbox)
- Organice Connect

OpenText
- Brava! for SharePoint
- Blazon

3.1 Organice Server Solutions Overview

All Organice server solutions are displayed in the overview below, grouped by their corresponding server.

- SharePoint Web Frontend service
- Organice DCS
- Organice Process System

WFE
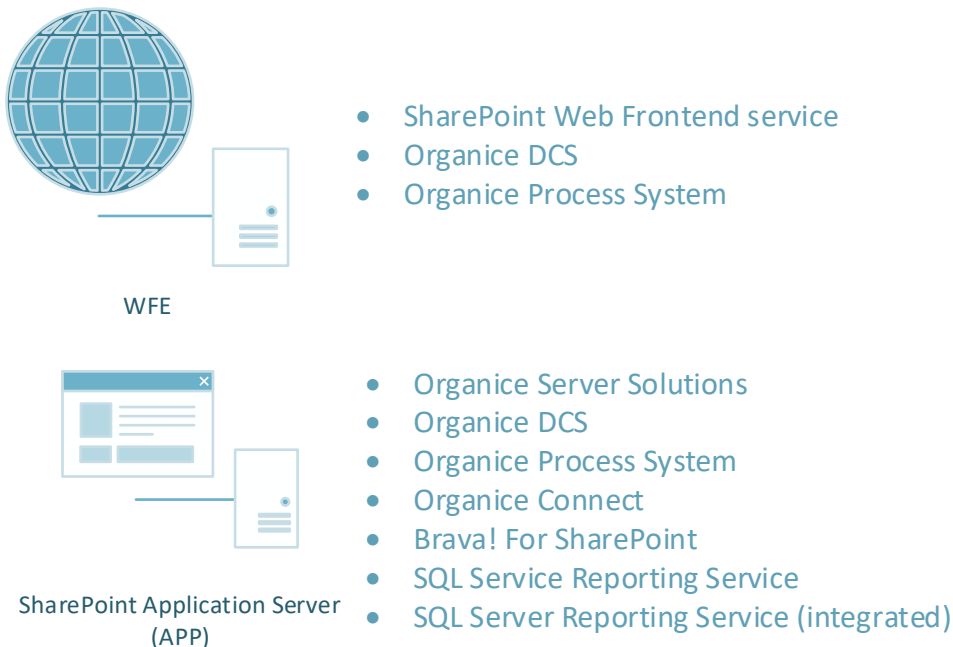

- Organice Server Solutions
- Organice DCS
- Organice Process System
- Organice Connect
- Brava! For SharePoint
- SQL Service Reporting Service
- SQL Server Reporting Service (integrated)

SharePoint Application Server (APP)

SEARCH

- SharePoint Search Service
- SharePoint Search Indexer
- SharePoint Search Crawler
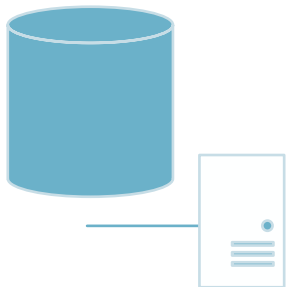
SQL

- SharePoint Databases
- Organice Databases
- SQL Server Reporting service (native)
- Organice Transmit Reporting Data Extension

BRAVA

- Brava! Enterprise Server
- Brava! Job Processor
- Brava! License Server
- Microsoft Office (x86)

BLAZON

- Blazon Job Processor
- Blazon Queue Server

3.2 Microsoft

3.2.1 Server Operating System

Every server in a SharePoint 2013 environment uses Microsoft Server 2012 R2 as an operating system. This operating system has been tested by Cadac for each Organice product in combination with SharePoint 2013 (discussed in chapter 3.3) and the compatible SQL Server versions (discussed in chapter 3.2.3).

Microsoft advises keeping the OS up-to-date. It is recommended to install the updates on the Test environment before approving them for Production. For SharePoint and SQL Server updates, please consult Cadac for advice.

3.2.2 SharePoint

In a SharePoint environment, we will be using Microsoft SharePoint Server 2013 (Standard or Enterprise). SharePoint must be installed on the following servers:
- Organice Application server (APP)
- SharePoint Web Frontend server (WFE)
- SharePoint Search Server (Search)

In this scenario, we use the Microsoft SharePoint Server 2013 RTM version.

3.2.3 SQL Server

In a SharePoint environment, we use either Microsoft SQL Server 2012 SP3 or Microsoft SQL Server 2014 SP1 for SQL Databases and Reporting.

The SQL Server Reporting Services (SSRS) must be installed on the Organice Application server (APP) and the SQL Server (SQL). However, the type of SSRS is different on each server:
- Native SSRS is installed on the SQL server
- Integrated SSRS is installed on the APP server

Also, note that the SSRS installed on the APP server requires an additional SQL Server license.

3.3 Cadac

This chapter summarises all Cadac Organice solutions for SharePoint 2013 and their corresponding requirements.

All solutions must be deployed on the application server that also hosts the Central Administration site.

3.3.1 Organice Server Solutions

For SharePoint 2013 we require the usage of Organice Server Solutions v1.0.0.4620 or higher.

In order to fully utilise the Organice Server Solutions, the following prerequisites are needed:
- An Internet connection is required to activate the Organice Management Site license
- The ability to send emails from the SharePoint Server (Outgoing Email relaying)

The Organice Server Solutions consist of multiple WSP solutions. Some of those solutions are deployed globally, others are deployed per web application (see the table below for a detailed overview).

Solution	Global	Per Web Application
Cadac Organice Solution Accelerator – Common	X	
Cadac Organice Solution Accelerator – Feature Manager	X	
Cadac Organice Solution Accelerator – Site Provisioning	X	
Cadac Organice Solution Accelerator – Document Numbering		X
Cadac Organice Solution Accelerator – Rule Based Item Security		X
Cadac Organice Licensing Suite		X
Cadac Organice Management Site		X
Cadac Organice Permission Manager		X
Cadac Organice Client Integration	X	
Cadac Organice Transmit Workbox Activities	X	
Cadac Organice Transmit SharePoint Integration		X

Cadac Organice Server Solutions also contains executable solutions:
- Cadac Organice Transmit Resolver Service
- Cadac Organice Support Pack for DWG
- Cadac Organice Support Pack for DGN
- Cadac Organice Transmit Reporting Services Data Extension*

This Data Extension will be installed against the Native SSRS for the Transmit Solution

Our solution also contains a 3rd party logging tool called SmartInspect Console. This application can be used to troubleshoot our solutions.

The Cadac Organice Transmit solution will create an additional SharePoint database, which is automatically created by SharePoint during installation.

3.3.2 Organice DCS Server Solutions

Note: Organice Process System is required to install the Organice DCS Solution.

In a SharePoint 2013 environment, we need <u>Organice DCS v1.0.0.31XX</u> or higher.
The Organice DCS Solution consists of one WSP solution that will be installed per web application. The package also contains:
- Cadac Organice Document Control System – Reporting* (Data Extension)
- SmartInspect Console

* This Data Extension will be installed against the SharePoint Integrated SSRS for the DCS Solution.

Solution	Global	Per Web Application
Organice DCS 2016		X

Organice DCS Server Solutions will create an additional SharePoint database, which is automatically created by SharePoint during configuration.

3.3.3 Organice Process System

Organice Process System (previously known as Workbox) is used as the workflow engine in Transmit and DCS. For SharePoint 2013 we require <u>Organice Process System v4.5.0.4900</u> or higher.
The Organice Process System solution consists of two WSP solutions:

Solution	Global	Per Web Application
Workbox		X
Datapolis License Management	X	

Organice Process System will create an additional SharePoint database, which is automatically created by SharePoint during installation.

3.3.4 Organice Connect

Organice Connect is a solution that enables users to provision sites on an existing web application. It also allows the user to synchronise documents and metadata into SharePoint from ERP systems.
For SharePoint 2013 we require Organice Connect v1.0.0.3400 or higher.
There are two WSP solutions that will be deployed on SharePoint:

Solution	Global	Per Web Application
Cadac Organice Connect		X
Cadac Organice Connect Design Manager		X

3.4 OpenText

3.4.1 Brava! Enterprise 16

The Brava! Enterprise product is composed of the following components:
- **Brava! Enterprise Server** – <u>a standalone web application server</u> that runs in Tomcat and receives and responds to client requests to publish documents for viewing.
- **License Manager** – Manages licenses for the Brava! Server and Brava! Clients. This component is installed on the Brava! Server.
- **Job Processor** – Receives and responds to publish requests from the Brava! Server. It's the engine that actually converts files from the native format to OpenText's view format. The Job Processor is usually installed on the Brava! Server.
- **Brava! for SharePoint solution** - This component consists of various ASPX pages and assemblies that integrate SharePoint functionality with Brava! Enterprise. This SharePoint solution is globally deployed for the SharePoint farm. You can, however, retract the solution from any non-Brava! web application.

3.4.1.1 SharePoint Solutions:

Solution	Global	Per Web Application
Brava2013		X
Brava Central Admin 2013		X
Brava IKVM	X	
Brava SDK	X	
IGC License	X	

3.4.1.2 Brava! Enterprise Server (BESS)

Brava! Enterprise is a servlet based application that receives and responds to publishing requests. It runs within a servlet engine and is composed of various supporting configuration files.
A server servlet (such as Tomcat, WebSphere, or WebLogic) is required for Brava! Enterprise and should be installed prior to running the Brava! Enterprise installer. If no servlet engine is found during the Brava! server installation, you are prompted to install Tomcat 7.0 or use a different servlet engine.
Java (7 or 8) Runtime is a requirement of Brava! Enterprise servlet container and will appear in the prerequisite list if not found on your machine during the installation. If not detected, the Java installation will run, and a system and setup restart will be required.

3.4.1.3 Job Processor and Brava License Manager

The installation of the <u>Brava! Enterprise Server</u> occurs on a standalone Windows server without SharePoint installed. Microsoft Office is required on the Job Processor machine to be able to publish Office file formats (DOC, DOCX, XLS, XLSX, PPT, and PPTX).

This component consists primarily of various Windows EXEs and DLLs. Typically, the Brava License Server is installed on one of the Job Processor machines. The Job Processor and Queue Server require.NET Framework 4.5.2.

3.4.1.4 Anti-Virus on Job Processor

The Job Processor is not supported by default on machines running anti-virus software. If you are required to run antivirus, Cadac can advise on exclusions and extension filtering.

3.4.1.5 Port Configuration

If you want your Windows Firewall (or equivalent) to be enabled on the server, you need to include the rules below to allow communication between Brava! and the SharePoint farm.
The following ports should be allowed:

From	To	Description	Port
SharePoint	Brava	Server (http)	8080 or 80
Brava	SharePoint	Server (http)	8080 or 80
SharePoint	Brava	Server (https)	8443 or 443
Brava	SharePoint	Server (https)	8443 or 443
Client	Brava	ActiveX	80 or 443
Brava	Client	ActiveX	80 or 443

Allow in- and outbound connections on Port 8080 (by default), 80 or 443 (SSL, 8443 for TomCat) from the Brava! Server to communicate with the SharePoint farm.

### 3.4.1.6 Brava! Communication Diagram

The diagram below depicts how the Brava server communicates in the SharePoint farm. Clients can connect internally as well as externally through the same web frontend.

Note: in order to use ActiveX, a direct HTTPS connection from the clients to the Brava server is required (red line). This restriction does not apply to the HTML control.
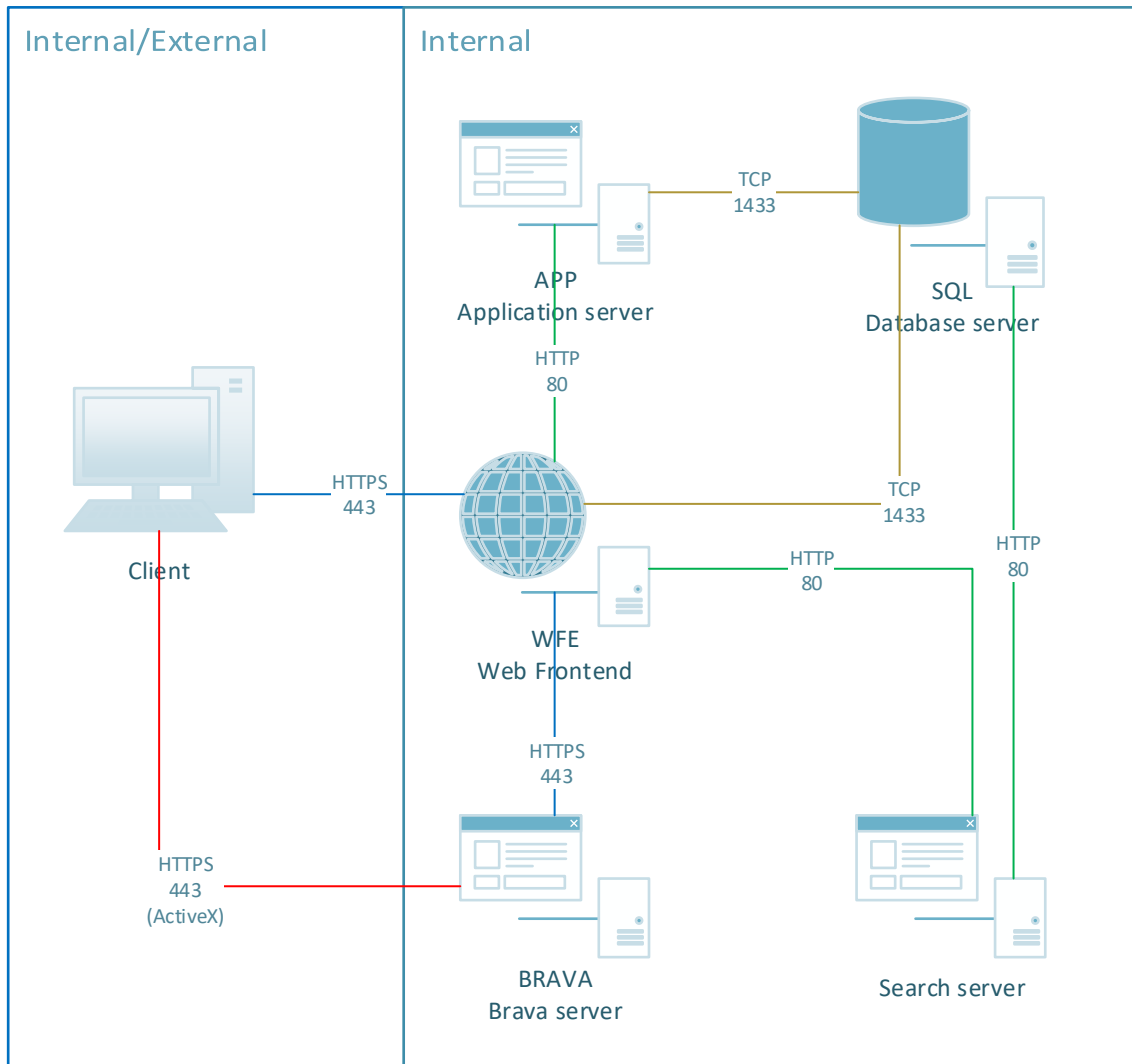
3.4.1.7 Brava Communication Diagram in a DMZ Infrastructure Scenario

This flow diagram depicts how the communication should be configured in a DMZ scenario.
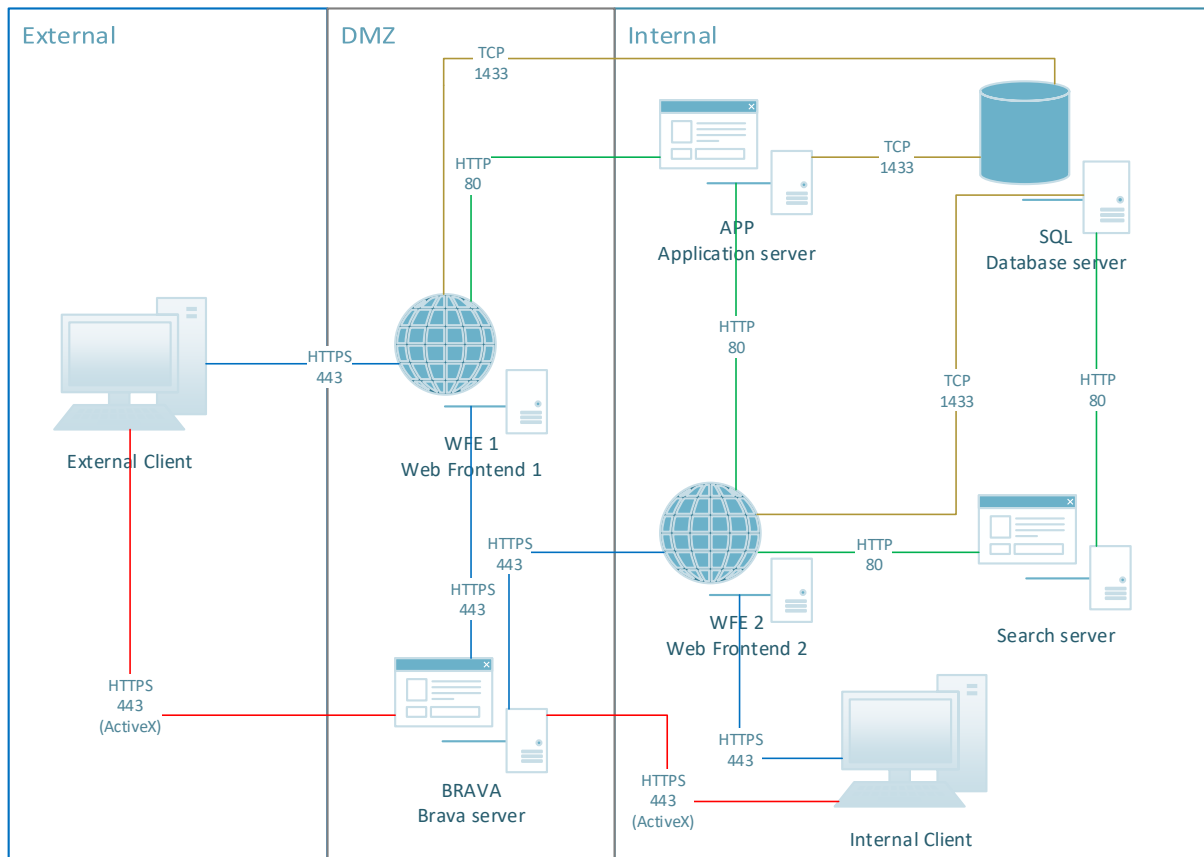
Both the SharePoint Server and the end-user client communicate with the Brava server via the HTTP (8080) or HTTPS (443) protocol. The settings Brava! Server URL from SharePoint and Brava server URL from Client represent the base URL to Brava from the respective locations.

The installation will set these values based on information supplied during the installation. Typically, these settings will be set to the same value. A scenario where they would be set differently is when client communication is encrypted. In this case, Brava server URL from Client would be set to the HTTPS (443) URL that Brava is set up on.

External ActiveX users:
*   The Brava! Server URL from Client needs to be published. (example: https://brava.external.cadac.com)
*   A valid SSL certificate needs to be applied to the Brava.Net Server IIS application binding)

External HTML users:
*   A valid SSL certificate needs to be applied to the Brava.Net Server IIS application binding)
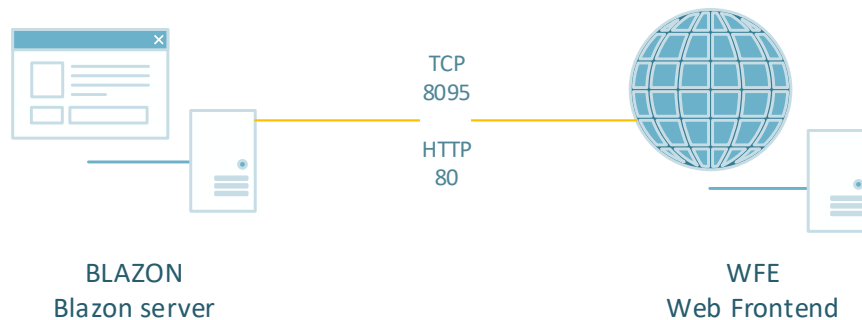
3.4.2 Blazon Enterprise 16

Blazon is a highly scalable server for publishing document and image files on-demand by users and can monitor Document Libraries for new files that are uploaded.

3.4.2.1 Blazon components

The Blazon Enterprise integration is composed of three major deployment components.

- **Blazon SharePoint solution**: globally deployed for the SharePoint farm. You can, however, retract the solution from any non-Blazon web application.
- **Job Processor**: the engine that converts files to their target format. Since this is resource intensive, the Job Processor needs to be deployed on a separate machine from where SharePoint is deployed.
- **Queue Server**: a standalone web application server that queues receives and queues requests for the Job Processor. The Job Processor is usually installed on the Blazon server.

3.4.2.2 Blazon communication Diagram

BLAZON
Blazon server

TCP
8095

HTTP
80

WFE
Web Frontend

3.4.2.3 Anti-Virus

The Job Processor is not supported on machines running anti-virus software. If you must run anti-virus software, see the core Blazon Enterprise 16 Administration Guide for instructions relating to this.

3.4.2.4 Ports

If you want your Windows Firewall (or equivalent) to be enabled on the server, you need to include the rules below to allow communication between Blazon and the SharePoint farm.
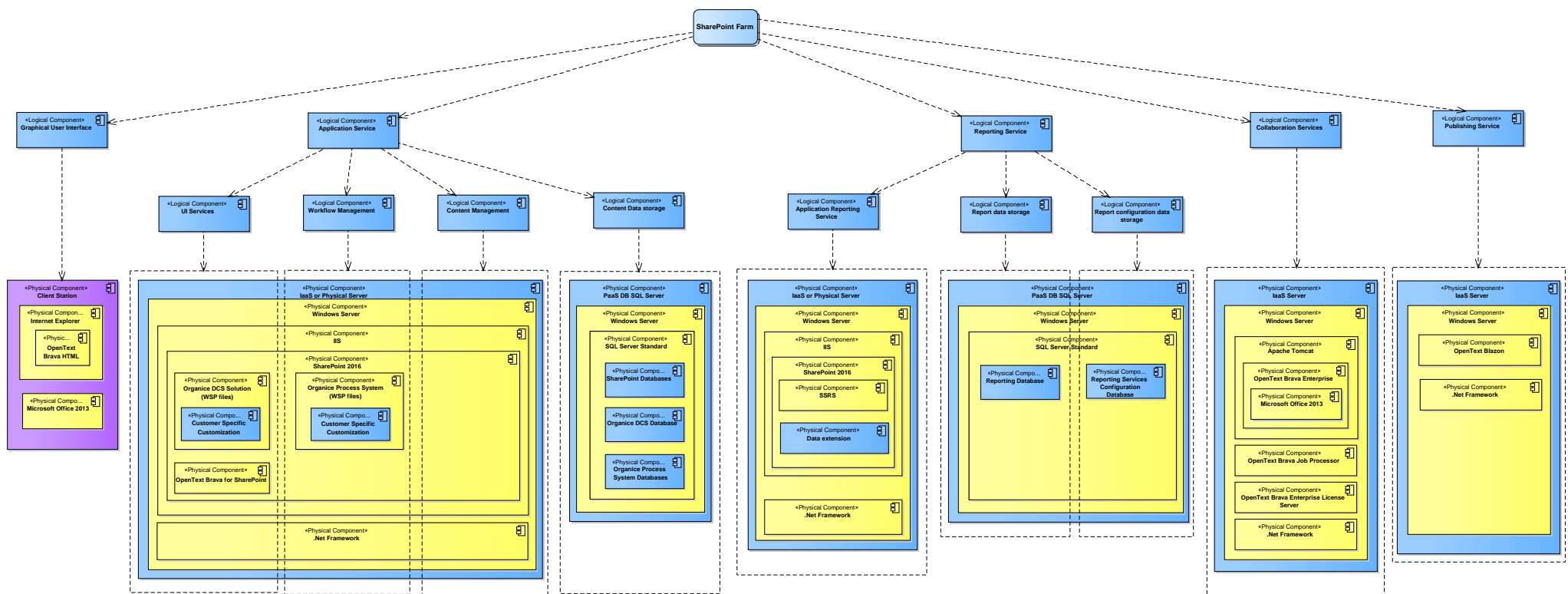The following ports should be allowed:

From	To	Description	Port
SharePoint	Blazon	Connection to Blazon	8095
Blazon	SharePoint	Connection to SharePoint	80

4 Architecture Design

4.1 Overview

All the discussed components from chapters one to three are summarised in this overview.

From left to right: Brava ActiveX Client, APP/WFE Server, SQL Server, APP Reporting Services, SQL Reporting Services, Brava Server, Blazon Server.

5 Attachments

5.1 SharePoint Service Accounts

These are the required service accounts that need to be created for SharePoint and its solutions. All the accounts must be a member of the "Domain Users" group.

Account Type	Account Name	Rights/Notes
Install Account (local administrator)	SP_Install	The user account that is used to run: • Setup on each server computer • SharePoint Products Configuration Wizard • The Psconfig command-line tool • The Stsadm command-line tool *If you run Windows PowerShell cmdlets that affect a database, this account must be a member of the db_owner fixed database role for the database.*
Farm Account	SP_Farm	This account is also referred to as the database access account. This account has the following properties: • It's the application pool identity for the SharePoint Central Administration website. • It's the process account for the Windows SharePoint Services Timer service.
Service Account	SP_Service	No local rights or SQL rights above Domain User.
Transmit Service Account	SP_Transmit	No local rights or SQL rights above Domain User. Needs to run a service.
Brava Service Account	SP_Brava	Administrative rights Brava Job server. Default domain user
Blazon Service Account	SP_Blazon	Administrative rights on Blazon Job server. Default domain user
SQL Server Service Account	SQL_Admin	SQL Server prompts for this account during SQL Server Setup. This account is used as the service account for the following SQL Server services: • MSSQLSERVER • SQLSERVERAGENT If you are not using the default instance, these services will be shown as: • MSSQL\<InstanceName> • SQLAgent\<InstanceName>

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5.2 Checklist

Please fill in the checklist below to validate that all Organice system requirements are met:

All the necessary production servers are available	☐
All the necessary test servers are available	☐
All the necessary service accounts are available with their correct permission sets	☐
All production servers meet the minimum hardware requirement	☐
All test servers meet the minimum hardware requirement	☐
Every server is installed with Microsoft Server 2012 R2	☐
Every SharePoint server is installed with Microsoft SharePoint Server 2013	☐
An SQL Server license is available for SSRS on the APP server	☐
Organice Server Solutions 1.0.0.4620 or higher will be installed on the farm	☐
Organice DCS Server Solutions 1.0.0.3000 or higher will be installed on the farm	☐
Organice Process System 4.5.0.4900 or higher will be installed on the farm	☐
Organice Connect 1.0.0.3400 or higher will be installed on the farm	☐
OpenText Brava! Enterprise 16 will be installed on the Brava and SharePoint servers	☐
An extra URL is available (externally) to implement Brava ActiveX client	☐
OpenText Blazon Enterprise 16 will be installed on the Blazon and SharePoint servers	☐
All the required ports/firewalls have been adjusted to this document	☐