AUCERNA RESERVES

PRE-INSTALLATION DOCUMENT 5.11.X

DOCUMENT HISTORY

Version	Description of Changes	Author	Date
1.0	Initial version	Arun Shaw	04 May 2021
1.01	Job share component added for Enterprise	Arun Shaw	14 May 2021
1.02	Corrected IaaS to On Premise in Hybrid deployment	Arun Shaw	28 May 2021
1.03	Added additional ports and context for Azure Service Bus	Arun Shaw	07 July 2021
2.0	Specifications Updated	AF/CG	9 Sept 2021

Contents

1   Introduction

This document contains software prerequisites and a high level component diagram for deploying Aucerna Reserves at your organization. An on premise-Azure hybrid or Azure only are both recommended deployments.

NOTE

- This is not a network diagram. Default ports are shown; firewalls/ WAFs are not depicted and are always recommended when running enterprise applications in a corporate environment.
- Interactions with (optional) Aucerna PlanningSpace integration are shown where that product is deployed alongside Aucerna Reserves.
- Isolated application tiers (TEST, PREPROD, PROD) are recommended. DEV/TEST/ TRAINING tiers can share some infrastructure but separate IIS sites, Agent services, databases and service bus namespaces are required.
- Minimum number of servers are depicted to attain high availability of Aucerna services where this is a requirement. High availability of on premise Microsoft SQL is not depicted.
- Disaster recovery is not considered in this document.

2   Component overview

2.1   Aucerna Reserves server

IIS server which runs Aucerna Reserves services.

2.2   Aucerna Reserves Agent

Connects directly to the database and runs Aucerna Reserves jobs.

Typically installed onto the same server as Aucerna Reserves but can be split onto separate server(s) for additional capacity or availability.

2.3   Job file share

Jobs created by Aucerna Reserves server(s) are picked by the Aucerna Reserves Agent(s) from the job file share. Typically not required as Aucerna Reserves and Agent are usually on the same server but can be a UNC path if these roles are split.

2.4   Service Bus

Inter-component messaging services used by Aucerna Reserves. **No data is persisted in Service Bus, and no client data of any kind is ever passed to it.**

Azure Service Bus is supported, which provides a highly available and resilient service without the need to install or maintain on premise components.

2.5 Database

Application schema and data.

3   Minimum Supported Hardware and Software Requirements

NOTE: If Aucerna Reserves, Agent and Microsoft Service Bus are installed on the same server, the recommended RAM is 64GB.

3.1   Aucerna Reserves
8c/ 48GB/ Windows Server 2016+

IIS 8.5 (see Installation Guide for feature details)

Microsoft .NET Framework version 4.7.2

Microsoft Web Deploy 3.5

Microsoft Access Database Engine 2016

Oracle 19c

Java 8

3.2   Aucerna Reserves Agent
8c/ 48GB/ Windows Server 2016+

Microsoft .NET Framework version 4.7.2

Microsoft Access Database Engine 2016

Oracle 19c

3.3   Azure Service Bus

Standard tier recommended unless there is a specific requirement for the Premium tier.

Please note, ports **443** and **5671** need to be open and accessible between all Aucerna Reserves/ Aucerna Reserves Agent servers and the relevant Azure Service Bus namespaces.

Eg.: RESERVES01.quorumsoftware.com:443,5671→ https://reserves-example.servicebus.windows.net

Below links have more information on Azure Service Bus:

https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-amqp-protocol-guide

https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-faq#what-ports-do-i-need-to-open-on-the-firewall--

NOTE: **Microsoft Service Bus has been deprecated by Microsoft.**
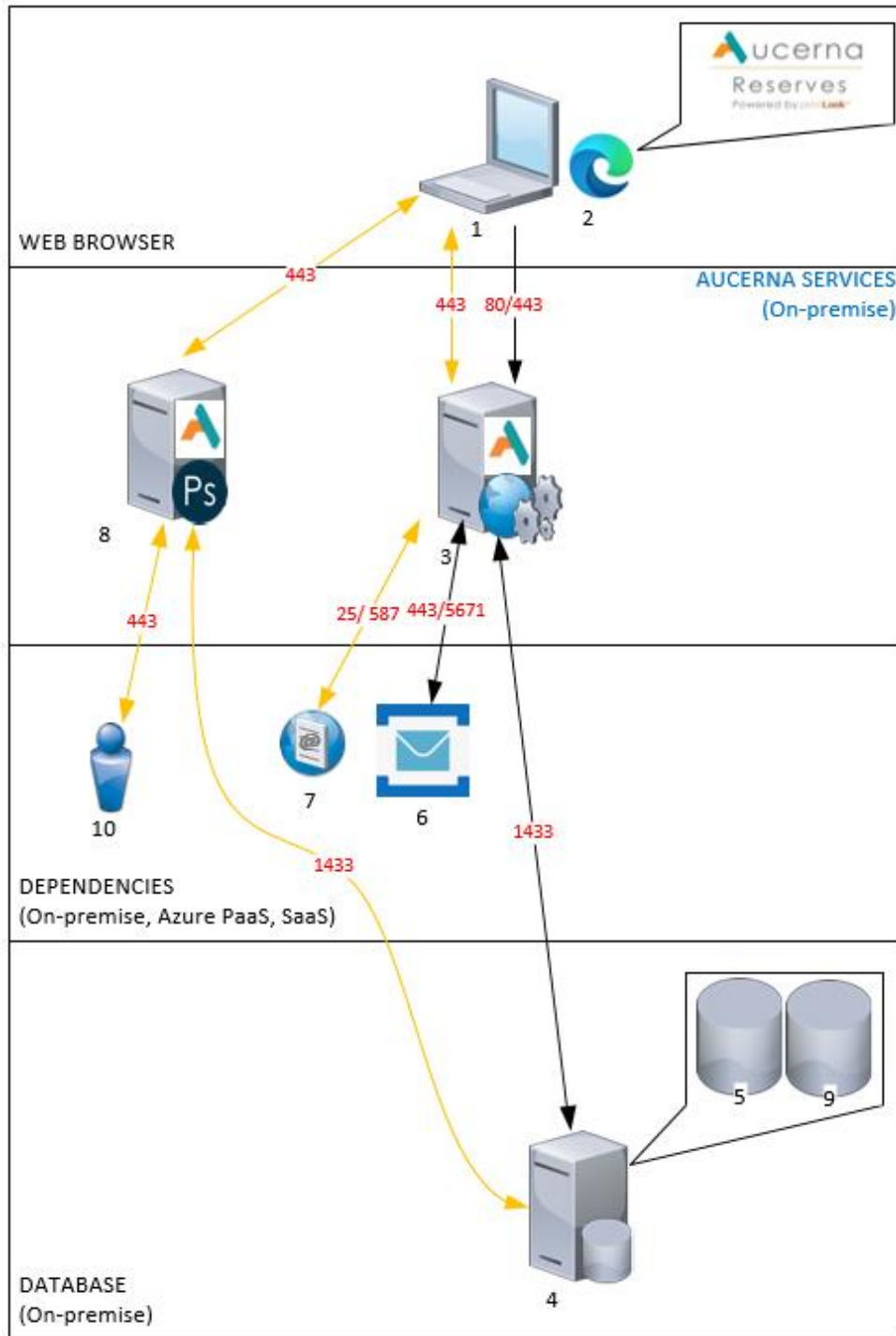
3.4 Database
8c/ 32GB

Sql Server 2016+ (minimum database compatibility level 130) or Oracle 19c

The speed with which the database can service Aucerna Reserves' requests is a cornerstone of a successful deployment. It is essential that the server for the Aucerna Reserves database is not over-provisioned and has a high bandwidth connection to the Aucerna Reserves server. These requirements extend to any other database Aucerna Reserves may have live links to, eg. Peep, Value Navigator or ARIES. The frequency and intensity of loads will also have an impact on the database requirements.
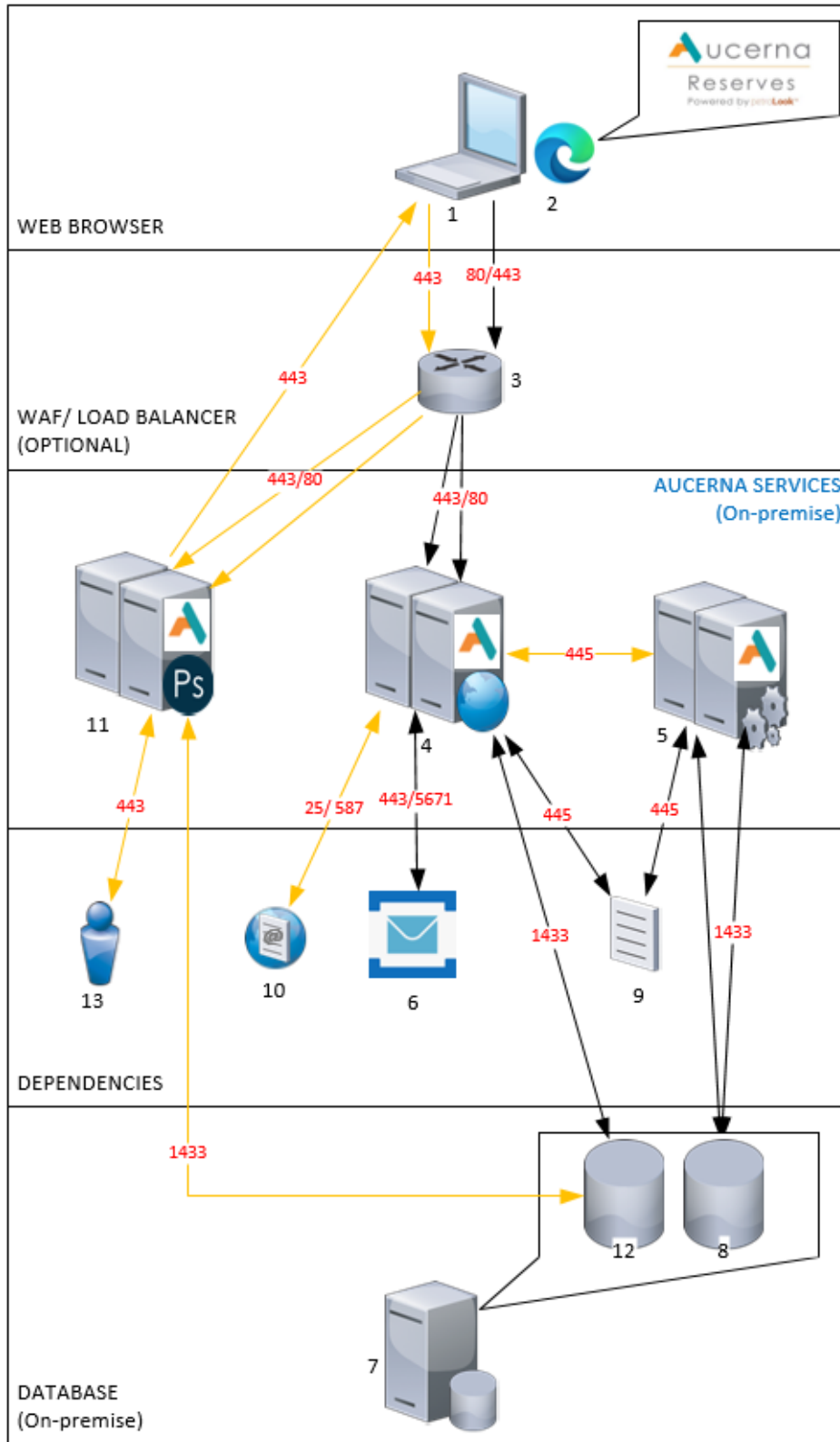
4 Deployment Architecture

4.1 On premise hybrid

On premise with Azure Service Bus

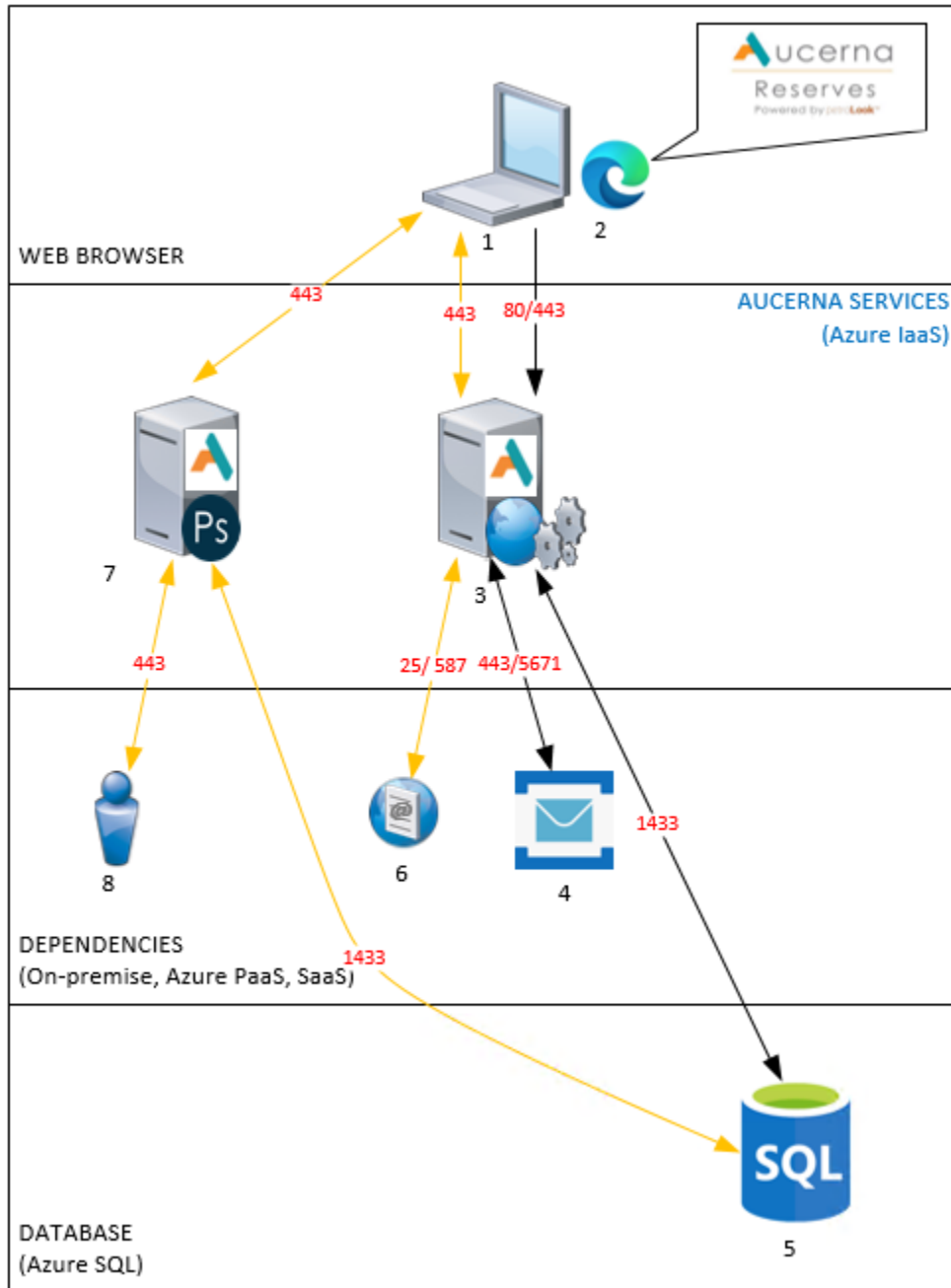| #	Key	#	Key
1	Workstation.	**6**	Azure Service Bus (PaaS).
2	Aucerna Reserves™ accessed via a modern web browser.	**7**	SMTP provider
3	Aucerna Reserves™ server running web and Aucerna Reserves™ Agent services.	**8**	Aucerna PlanningSpace™ server. Will be used for authentication and licencing where this system is integrated with Aucerna Reserves™.
4	Microsoft SQL Server.	**9**	Aucerna PlanningSpace™ (common and tenant) databases.
5	Aucerna Reserves™ database.	**10**	SAML identity provider. Can be used for authentication via Aucerna PlanningSpace™ server (s) where this system is integrated with Aucerna Reserves™.

Enterprise

#	Key	#	Key
1	Workstation.	**8**	Aucerna Reserves™ database.
2	Aucerna Reserves™ accessed via a modern web browser.	**9**	Job file share.
3	WAF or load balancer (optional). Allows for high availability of Aucerna web services (application, authentication, licencing).	**10**	SMTP provider.
4	Aucerna Reserves™ web server(s). Can be load balanced for high availability.	**11**	Aucerna PlanningSpace™ server (s). Can be clustered for high availability. Will be used for authentication and licencing where this system is integrated with Aucerna Reserves™.
5	Aucerna Reserves™ Agent server(s). This can be split onto separate server(s) for additional capacity and/ or availability.	**12**	Aucerna PlanningSpace™ common (system) and tenant databases.
6	Azure Service Bus (PaaS).	**13**	SAML identity provider. Can be used for authentication via Aucerna PlanningSpace™ server (s) where this system is integrated with Aucerna Reserves™.
7	Microsoft SQL or Oracle database.		

4.2 Azure only

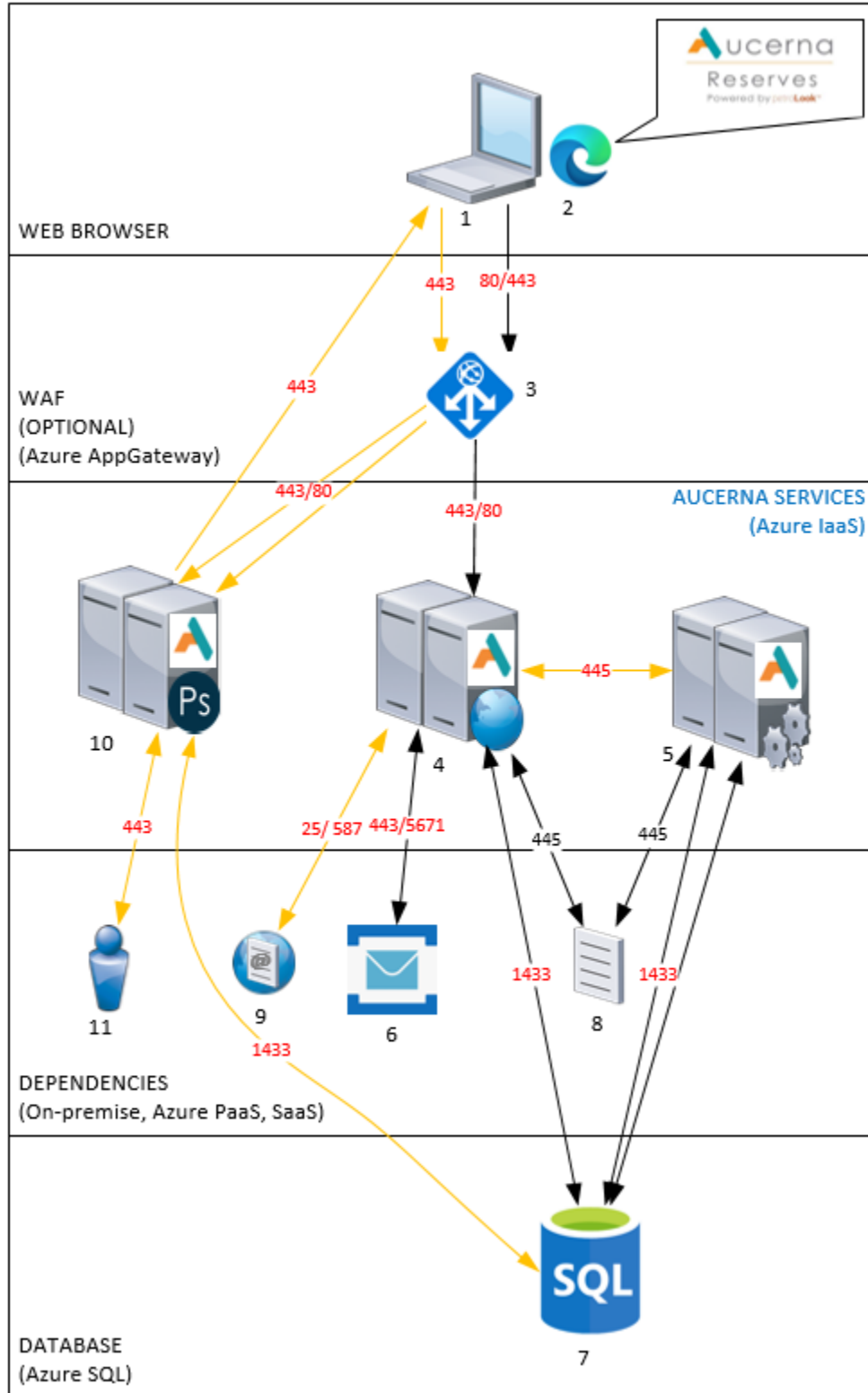Aucerna services should be deployed via IaaS in the same region/ zone as Azure services.

<u>Standard</u>

#	Key	#	Key
1	Workstation.	5	Azure Service Bus (PaaS).
2	Aucerna Reserves™ accessed via a modern web browser.	6	SMTP provider.
3	Aucerna Reserves™ server running web and Aucerna Reserves™ Agent services.	7	Aucerna PlanningSpace™ server. Will be used for authentication and licencing where this system is integrated with Aucerna Reserves™.
4	Aucerna Reserves™ database, Aucerna PlanningSpace™ (common and tenant) databases* on Azure SQL.	8	SAML identity provider. Can be used for authentication via Aucerna PlanningSpace™ server (s) where this system is integrated with Aucerna Reserves™.

*Azure SQL support for Aucerna PlanningSpace available Q2/ Q3 2021

Enterprise

#	Key	#	Key
1	Workstation.	7	Aucerna Reserves™ database, Aucerna PlanningSpace™ (common and tenant) databases* on Azure SQL.
2	Aucerna Reserves™ accessed via a modern web browser.	8	Job file share.
3	Azure AppGateway (optional). Allows for high availability of Aucerna web services (application, authentication, licencing).	9	SMTP provider.
4	Aucerna Reserves™ web server(s). Can be load balanced for high availability.	10	Aucerna PlanningSpace™ server (s). Will be used for authentication and licencing where this system is integrated with Aucerna Reserves™.
5	Aucerna Reserves™ Agent server(s). This can be split onto separate server(s) for additional capacity and/ or availability.	11	SAML identity provider. Can be used for authentication via Aucerna PlanningSpace™ server (s) where this system is integrated with Aucerna Reserves™.
6	Azure Service Bus (PaaS).		

*Azure SQL support for Aucerna PlanningSpace available Q2/ Q3 2021