Suite			Manufa	cturing	& Supp	oly Chai	n Suite		
			Pe	troleum !	Supply C	hain (PS	C)		
V14 Platform Specifications that are supported	Aspen Unified	Petroleum Supply Chain Planner (PSCP/DPO)	Aspen Petroleum Scheduler (APS)	Multi-Blend Optimizer (MBO)	PIMS	Aspen Verify	Aspen Fleet Optimizer (AFO) Web Server	AFO Connect	Aspen Fleet Optimizer (AFO)
Operating Systems (64-bit only)									
Windows 11	✓	✓	✓	✓	✓	✓		✓	✓
Windows 10 Enterprise & Professional (64-bit)	✓	✓	✓	✓	✓	✓		✓	✓
Windows Server 2022 ^{33, 45}	✓	✓	✓	✓	✓	✓	✓	✓	✓
Windows Server 2019 ^{33, 45}	✓	✓	✓	✓	✓	✓	✓	✓	✓
Windows Server 2016 ^{33, 45}	✓	✓	✓	✓	✓	✓	✓	√	✓
Ubuntu Server Edition 20.04 LTS									
Ubuntu Server Edition 18.04 LTS									
Ubuntu Server Edition 16.04 LTS									
Microsoft Office									
Office 365 (Desktop/Click-to-run) (32-bit/64-bit)	✓	✓	✓	✓	✓	✓			✓
Office 2021 (64-bit)	✓	✓	✓	✓	✓	✓			✓
Office 2021 (32-bit)	✓	✓	✓	✓	✓	✓			✓
Office 2019 (64-bit)	✓	✓	✓	✓	✓	✓			✓
Office 2019 (32-bit)	✓	✓	✓	✓	✓	√			✓
Office 2016 (64-bit)	✓	✓	✓	✓	✓	✓			✓
Office 2016 (32-bit)	✓	✓	✓	✓	✓	√			✓
Office 2013 (32-bit)		✓	✓	✓	✓	√			√
Database Servers									
Microsoft SQL Server 2019 (Enterprise/Standard Edition)	✓	✓	✓	✓	✓	✓	✓		✓
Microsoft SQL Server 2019 (Express Edition)	✓		✓	✓	✓	✓			
Microsoft SQL Server 2017 (Enterprise/Standard Edition)	✓	✓	✓	✓	✓	✓	✓		✓
Microsoft SQL Server 2017 (Express Edition)	✓		✓	✓	✓	✓			
Microsoft SQL Server 2016 (Enterprise/Standard Edition)	✓	✓	✓	✓	✓	✓	✓		✓
Microsoft SQL Server 2016 (Express Edition)	✓		√	√	√	√			
Microsoft SQL Server 2014 (Enterprise/Standard Edition)	√47	✓	✓	√	✓	✓	√		✓
Microsoft SQL Server 2014 (Express Edition)	√47		√	√	✓	√			
SQL Server 2019 Local DB	√12	√ ¹²	√ ¹²	√ ¹²	√ ¹²	√ ¹²			
SQL Server 2014 -2019 Analysis Services									
PostgreSQL 13.2									
Oracle Database 19.x.x 64-bit			√	√			√		√
Database Clients									

Suite			Manufa	ecturing	& Supp	oly Chai	in Suite		
			Pe	troleum :	Supply C	hain (PS	SC)		
V14 Platform Specifications that are supported	Aspen Unified	Petroleum Supply Chain Planner (PSCP/DPO)	Aspen Petroleum Scheduler (APS)	Multi-Blend Optimizer (MBO)	PIMS	Aspen Verify	Aspen Fleet Optimizer (AFO) Web Server	AFO Connect	Aspen Fleet Optimizer (AFO) (Retail)
Oracle Client 19 x 32-bit									√
Oracle Client 19.x 64-bit			√	√					
Oracle Client 18.x 32-bit									
Runtimes									
.NET Framework 4.8	✓	✓	✓	✓	✓	√	✓		✓
.NET 6.0.3							✓	✓	
Aspen AloT Cloud libraries									
ASP.NET Core 6.0.3									
64-bit Oracle Java 17 JDK LTS									
64-bit Oracle Java 17 JDK LTS									
64-bit Oracle Java 11 JDK LTS									
64-bit Oracle Java 8 JDK LTS									
64-bit Oracle Java 8 JDK LTS									
32-bit AdoptOpenJDK Java 17 JRE LTS									
64-bit AdoptOpenJDK Java 17 JRE LTS									
32-bit AdoptOpenJDK Java 11 JRE LTS									
64-bit AdoptOpenJDK Java 11 JRE LTS									
64-bit AdoptOpenJDK Java 8 JRE LTS									
Python									
MSXML 6	✓			✓	✓		✓	✓	✓
Visual Studio 2022									
Visual Studio 2019									
Visual Studio 2017									
Visual Studio 2010 Tools for Office Runtime			√	√					
Microsoft Visual C++ Redistributable 2022							1	✓	
Microsoft Visual C++ Redistributable 2019	✓	✓	√	√	√	✓			✓
Microsoft Visual C++ Redistributable 2017	✓	√	√	√	√	√			
Virtualization									
Microsoft Hyper-V (Server)	✓	✓	✓	✓	✓	✓	✓		✓
VMware ESXi Hypervisor Server 6.x (Server)	✓	✓	✓	✓	✓	✓	✓		✓
VMWare vSphere Enterprise Plus									

Suite			Manufa	cturing	& Supp	oly Chai	n Suite		
			Pe	troleum S	Supply C	hain (PS	iC)		
V14 Platform Specifications that are supported	Aspen Unified	Petroleum Supply Chain Planner (PSCP/DPO)	Aspen Petroleum Scheduler (APS)	Multi-Blend Optimizer (MBO)	PIMS	Aspen Verify	Aspen Fleet Optimizer (AFO) Web Server	AFO Connect	Aspen Fleet Optimizer (AFO) (Retail)
Microsoft Terminal Services (Desktop)								√	✓
Citrix Virtual Apps and Desktops 7.1912 (Desktop)								√	√
Web Browsers									
Microsoft Edge ²⁵	✓	√23	√23	√23	√23	√23	✓	✓	
Google Chrome Evergreen Version 75+	✓	√23	√23	√23	√23	√23	√	√	
Firefox									
Chrome on iOS 14+ for iPad Support									
Safari on iOS 14+ for iPad Support								√34	
Android 10+									
Security Components/Services				l					
Aspen Framework (AFW) 5					√				
TLS 1.2	✓	✓	✓	✓	✓	✓			
TLS 1.3	✓	✓	✓	✓	✓	✓			
Java App (Servers)		<u> </u>	1				ı		1
Apache Tomcat 9.x									
Native Web Servers									
IIS 10									
Reporting Services									
Microsoft Report Viewer 2015									
Microsoft SQL Server 2014/2016/2017/2019/ 2020/2022 Reporting Services		✓	✓	✓	✓				
Load Balancing									
F5 Load Balancing									
Integration Components									
Aspen Supply Chain Connect									
Informatica Powercenter 10.5.2									
Cloud Support * Azure VM (Microsoft)	√	√	√	√	√	√			
AWS VM (Amazon)									
Azure VM - Linux									
Azure Virtual Desktop (AVD) 27		✓	√		✓				
AWS RDS (SQL)									
Azure SQL	✓	✓	√	✓	√	✓			
Deployment Tools									
SCCM									
Supported Versions of Fortran									

Suite			Manufa	cturing	& Supp	oly Chai	n Suite		
			Pe	troleum S	Supply C	hain (PS	C)		
V14 Platform Specifications that are supported	Aspen Unified	Petroleum Supply Chain Planner (PSCP/DPO)	Aspen Petroleum Scheduler (APS)	Multi-Blend Optimizer (MBO)	PIMS	Aspen Verify	Aspen Fleet Optimizer (AFO) Web Server	AFO Connect	Aspen Fleet Optimizer (AFO) (Retail)
FORTRAN 2021					✓				
Container Support									
Docker Engine-Enterprise 19.03.x									
Docker Compose 1.26.x									
Desktop Types - Minimum Recommended									
Type I: Computer & processor: Intel Core-i5 family or faster Memory (RAM in GB): 16 Hard Disk (GB): 120 Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor Network (MB/S): 100Mbps									
Type II: Computer & processor: Intel Core-i5 family or faster Memory (RAM in GB): 16 Hard Disk (GB): 250 Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor Network (MB/s): 100Mbps Type III:	✓	√	✓	✓	√	√	√	√	✓
Computer & processor: 4CPU >= 2.8GHz (turbo max 3.2 preferred) Memory (RAM in GB): 16 Hard Disk (GB): 100 Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor Network (MB/s): 100Mbps									
Server Types - Minimum Recommended									
Type I: Computer & processor: Intel Core-i7 family or faster for standalone deployment Intel Xeon Gold series, 4 cores or more for multi-user environment Memory (RAM in GB): 16 + for standalone deployment, 32+ for multi-user environment Hard Disk (GB): 150 for standalone deployment, 300 for multi-user environment Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor Network: 100 Mbps	✓							√	
Type II: Computer & processor: Intel Xeon Gold series type system (4 cores) or faster Memory (RAM in GB): 16 + Hard Disk (GB): 300 + Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor Network: 100 Mbps									
Type III: Computer & processor: Intel Cascade Lake-based Xeon processor with 8 cores or more per processor Memory (RAM in GB): 32 or above gigabytes (GB) RAM Hard Disk (GB): 500 gigabytes (GB) or more available Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor Network: 100Mpbs (Gigabyte network recommended)									
Type IV: (IIoT Gateways) Computer & processor ARM or Intel based CPU or more Memory (RAM in GB): 256Mb or more Hard Disk (GB): 100 GB or more									
Type V Windows Server 2019 v1809+ Memory (RAM in GB): Minimum: 16 Recommended: 32 Cores: Minimum: 4, Recommended: 8 Disk space (GB): Minimum: 64, Recommended: 100 Network: Minimum: 50, Recommended: 100 Mbps									

Suite			Manufa	cturing	& Supp	oly Chair	n Suite		
			Pe	troleum S	Supply C	hain (PS	C)		
V14 Platform Specifications that are supported	Aspen Unified	Petroleum Supply Chain Planner (PSCP/DPO)	Aspen Petroleum Scheduler (APS)	Multi-Blend Optimizer (MBO)	PIMS	Aspen Verify	Aspen Fleet Optimizer (AFO) Web Server	AFO Connect	Aspen Fleet Optimizer (AFO) (Retail)
Type VI Computer & processor: Intel Xeon E class processor or equivalent with dual core min. Memory (RAM in GB): Minimum: 4 Hard Disk (GB): Minimum 50. High IOPS drive, SSD preferred Network: 100 Mbps									
Type VII Computer & processor: Intel Xeon E class processor or equivalent with dual core min. Memony (RAM in GB): 8 + Hard Disk (GB): 100 GB min. High IOPS drive, SSD preferred Network: 100Mpbs									
Type VIII Computer & processor: Intel Xeon E class processor or equivalent with 8 cores or higher Memory (RAM in GB): 12 or above gigabytes (GB) RAM Hard Disk (GB): 2000 min. High IOPS drive, SSD preferred Network: 2000Mbps									
Type IX Single model environment: Computer & processor: 4 vCPU >+ 2.8 GHz Memory (RAM in GB): 8+ Hard Disk (GB): 100 Network: 100Mbps									
Type X Single model environment: Computer & processor: 8 vCPU >+ 3.2 GHz Memory (RAM in GB): 16+ Hard Disk (GB): 100 Network: 100MMps									
Type XI Multiple models within single environment (max models <= 10): Computer & processor: 4 vCPU > + 2.8 GHz (add 1.5vCPU per concurrent user) Memory (RAM in GB): 8+ (add 3GB per concurrent user) Hard Disk (GB): 100 (add .5GB per concurrent user) Network: 100Mbps									
Type XII Multiple models within single environment (max models <= 10): Computer & processor: 8 vCPU > + 3.2 GHz (add 1.5vCPU per concurrent user) Memory (RAM in GB): 16 or above gigabytes (GB) RAM (add 4GB RAM per concurrent user) Hard Disk (GB): 100 GB min. (add .5GB per concurrent user) Network: DOMMpbs									
Type XIII Supports 20 concurrent users: Computer & processor: 16 vCPU >+ 2.2 GHz) Memory (RAM in GB): 64 Hard Disk: 100 Network: 10 Mbps									
Type X1V Supports 100 concurrent users: Computer & processor: 16 vCPU >+ 2.2 GHz) Memory (RAM in GB): 32 Hard Disk (GB): 100 Network: 5 Mibps									
Type XV Computer & processor: 16 vCPU >+ 2.2 GHz) Memory (RAM in GB): 32 Hard Disk (GB): 100Mbps									

Notes

Suite			Manufa	cturing 8	ያ Supp	ly Chai	n Suite		
			Pe	troleum S	upply C	hain (PS	C)		
V14 Platform Specifications that are supported	Aspen Unified	Petroleum Supply Chain Planner (PSCP/DPO)	Aspen Petroleum Scheduler (APS)	Multi-Blend Optimizer (MBO)	PIMS	Aspen Verify	Aspen Fleet Optimizer (AFO) Web Server	AFO Connect	Aspen Fleet Optimizer (AFO) (Retail)
* In general, AspenTech aspenONE® software license agreements with customers permit use of the licensed software on Supported Computers at customer Sites. "Supported Computers" include computers with a manufacture, model and operating system for which AspenTech offers a supported version of the software, and that are controlled by the customer. "Sites" are customer facilities or locations specified in the license agreement.	Scheduling	Supply Chain J. Petroleum St (MBO), PIMS, (Retail)	apply Chain	Planner (PSCP), Aspen Pe	etroleum Sc	neduler (APS)	,Multi-Blen	d
AspenTech permits customer use of licensed aspenONE software in the cloud where: (i) the Platform Support specifications published by AspenTech for the relevant version of the software product include cloud support; (ii) only the customer has access to the licensed software hosted by the cloud service provider, and (iii) the user is accessing the software only from a Site specified in the applicable license agreement.									
Cloud deployment does not change any license restrictions, including the restrictions on which regions can access the software.									
When running software on a virtual machine, the machine should meet the same requirements. AspenTech does not support the in-place upgrade of the Operating System (for example: upgrade Windows 7 to Windows 10) with AspenTech software already installed. Our recommendation is to uninstall Aspen Software before upgrading the OS and reinstall it after the upgrade.									
Your Aspen SLM Server must be installed and running prior to installing any V14 product. If running standalone, 1280 x 800 is the minimum recommended resolution monitor for									
For SLM server using Type 1 Desktop configuration, the minimum memory is 4GB with 20GB									
hard drive. Microsoft Active Directory/Domain Services (Required for aspenONE Web Server)									
A minimum of 10GB of free space is needed to install/upgrade products on the C drive. This configuration is only practical for small scale models and deployments. For most applications, best deployment practice dictates the use of a separate and dedicated database server for acceptable performance									
EDR does not use any database servers. Deploys its own LocalDB database files.									
Aspen Batch Process Developer does not support the 64-bit version of Visio. Visio is used in ABPD to generate the block diagram and process flow diagram reports; it is an optional feature. The 64-bit versions of Word and Excel are fully supported by ABPD.									
When Aspen Utility model is driven by Aspen Online using Local System Account, then SQL Express 2014 is required.									
When Exchanger Design and Rating is driven by Aspen Online using Local System Account, then SQL Express 2014 is required									
Aspen Modeler family supports FORTRAN compiler version 2020									
7 Oracle or AdoptOpenIDK Java is needed if the 3rd party scheduling application Primavera is used with Economic Evaluation (EE). Primavera is owned by Oracle and its API uses Java.									
⁸ Must be in compatibility mode for Aspen Process Sequencer									
9 See "Basic Deployment Recommendations" in Appendix C of the Aspen Manufacturing Suite Advanced Process Control Installation Guide.									
10 For new installations of APC Web Server, install IIS and JRE before installing APC Web									

Suite			Manufa	cturing	& Supp	oly Chai	in Suite		
			Pe	troleum S	Supply C	hain (PS	5C)		
V14 Platform Specifications that are supported	Aspen Unified	Petroleum Supply Chain Planner (PSCP/DPO)	Aspen Petroleum Scheduler (APS)	Multi-Blend Optimizer (MBO)	PIMS	Aspen Verify	Aspen Fleet Optimizer (AFO) Web Server	AFO Connect	Aspen Fleet Optimizer (AFO) (Retail)
11 CIM-IO Interfaces can be installed on 32-bit desktops									
12 This configuration is only practical for small scale models and deployments. For most applications, best deployment practice dictates the use of a separate and dedicated database server for acceptable performance.									
Only Web Download Excel Add-in requires Excel.									
Users need to install both the 32-bit and 64-bit Oracle Clients 19.x for building and									
running reports 16 Non-English OS's are not supported									
SLM supported in cloud (Azure VM/Amazon VM) for ENG products that are supported in									
the cloud 10 If FIPS is enabled, aspenONE Exchange users must have the latest Windows Update patches installed on their machine.									
Office 365 - 32-bit support only									
222 Server-grade systems are not required but still supported.									
Browser Support as it relates to Knowledge Delivery only									
ATOMS Web does not support Oracle									
Only the version of MS Edge that uses the Google Chrome engine is supported									
Maestro supports Windows Server 2019 version 1809+									
27 WVD Certification Notes — 1. Publishing WVD apps to users local machine start menu not supported 2. Interoperability with 3rd party products only supported with Office 365 3. Aspen Properties Enterprise Database (APED) via SQL Server not supported 4. The following products have not been certified for WVD: ABE, ABPD, AVCA 28 APEM does not support CDB-PDB database in Oracle 19. Weigh & Dispense Client 32-bit does not support Oracle									
229 SCCM support for APEx only									
APM Insights must be installed on the same server as AEI.									
31 When you have more than 8 simultaneous users, the recommendation is 2CPU's and 4GB RAM per user. Performance will vary based on product and usage profiles. This can be									
OptiPlant requires a graphic card which supports OpenGL 4.1									
33 Includes support for Windows Server Datacenter									
34 Browser support for AFO Connect									
Type II is the minimum recommended when IP.21 is used with Aspen Enterprise IP.21									
36 Small SLM Server									
Medium SLM Server									

Suite	Manufacturing & Supply Chain Suite
	Petroleum Supply Chain (PSC)
V14 Platform Specifications that are supported	Aspen Unified Petroleum Supply (Chain (Paca) (Aspen Petroleum Scheduler (APS) Multi-Blend Optimizer (MBO) PIMS Aspen Fleet Optimizer (AFO) Web Server AFO Connect Aspen Fleet
39 These applications can run on a desktop, but it is recommended to run models on a server	
 This Application Should be installed on a dedicated Web Server. Require db needs to be created in MS SQL using Mtell and then migrated to the target 	-
platform 42 "Desktop Experience" installation of Windows Server. Windows Server installers present the	
required.	-
43 SQL is needed for S3D Layout, SQL versions 2014 and 2016 are supported by Hexagon 44 Resolution no higher than 1920x1080	
45 Refer to the AspenTech Lifecycle Knowledge Base article to see a reference to the supported Windows Server upgrade path: https://esupport.aspentech.com/S_ProductLifecyclePolicy	
46 The selected product uses Java 11 JRE as Oracle do not have an option to download JRE, please use Oracle JDK download	
47 SQL Server 2014 does not support AT TIME ZONE functionality Due to this, Daylight Saving time will not be accounted for in the database views defined in Unified Scheduling Results database. 10/25/2022	
19,19,000	