Suite	Manufacturing & Supply Chain Suite																
							Manufa	acturing	Executio	n System	ıs (MES)						
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Operating Systems (64-bit only)																	
Windows 11 Enterprise & Professional (64-bit)	√	✓		\		✓	\		✓		✓			✓	✓	✓	
Windows 10 Anniversary Enterprise & Professional (64-bit)	✓	✓		✓		√	\		✓		√			✓	✓	✓	
Windows 8.1 Update 1 Enterprise & Professional (64-bit)	√	✓		✓		√	✓		✓		√			√	√	√	
Windows Server 2019	✓	✓	✓	✓	✓	√	\	√	✓	√	√	✓	✓	✓	✓	✓	
Windows Server 2016	√	✓	✓	✓	✓	✓	√	✓	✓	✓	√	✓	✓	✓	✓	✓	✓
Windows Server 2012 R2	✓	✓	✓	√	√	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ubuntu Server Edition 20.04 LTS																	
Ubuntu Server Edition 18.04 LTS																	
Ubuntu Server Edition 16.04 LTS																	
Microsoft Office			•					ì	1	ì	ì	,	ı	•	•		
Office 365 (Desktop/Click-to-run) (32-bit/64-bit)	✓	✓		√14							√21					√21	
Office 2021 (64-bit)	✓	✓		√ 14													
Office 2021 (32-bit)	✓	✓		√ 14							✓					✓	
Office 2019 (64-bit)	✓	✓		√14													
Office 2019 (32-bit)	✓	✓		√14							✓					✓	
Office 2016 (64-bit)	✓	✓		√14													
Office 2016 (32-bit)	✓	✓		√14							√					✓	
Office 2013 (32-bit)	\checkmark	✓		√14							✓					\checkmark	
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)																	

Suite							Manuf	acturing	g & Sup	ply Chai	in Suite						
							Manufa	acturing	Executio	n System	ns (MES)						
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Microsoft SQL Server 2014 (Enterprise/Standard Edition)					√	✓		✓	✓	✓	✓	✓	√			✓	
Microsoft SQL Server 2014 (Express Edition)																	
Microsoft SQL Server 2012 (Enterprise/Standard Edition)					✓	✓		✓	✓	✓	✓	✓	✓			✓	
Microsoft SQL Server 2012 (Express Edition)																	
SQL Server 2014 Local DB																	
SQL Server 2016 Local DB																	
SQL Server 2012 -2019 Analysis Services																	
Oracle Database 19.x.x 64-bit					✓	✓		✓		✓		✓				✓	
Oracle Database 18xx 64-bit																	
Oracle Database 12.2 64-bit													√28				
Database Clients																	
Oracle Client 19.x 32-bit	✓	✓			✓	✓		√24	√24	✓	✓	✓				✓	
Oracle Client 19.x 64-bit	✓	✓			✓	✓						✓				✓	
Oracle Client 18.x 32-bit																	
Oracle Client 12.2 64-bit													✓				
Oracle Client 12.2 32-bit													✓				
Runtimes								•									
.NET Framework 4.8	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
.NET Core 3.1.x																	
ASP.NET Core 3.1.x																	
64-bit Oracle Java 11 JRE LTS			✓										✓				✓
64-bit Oracle Java 11 JDK LTS																	
64-bit Oracle Java 8 JRE LTS																	
64-bit Oracle Java 8 JDK LTS																	
32-bit AdoptOpenJDK Java 11 LTS													✓				
64-bit AdoptOpenJDK Java 11 LTS			✓										✓				✓

Suite							Manuf	acturing	g & Sup	ply Chai	in Suite						
							Manufa	acturing	Executio	n System	s (MES)						
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64-bit AdoptOpenJDK Java 8 LTS																	
MSXML 6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓
Visual Studio 2019																	
Visual Studio 2017	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Visual Studio 2015																	
Visual Studio 2013	✓																
Visual Studio 2010 Tools for Office Runtime	✓	✓															
Microsoft Visual C++ Redistributable 2019																	
Microsoft Visual C++ Redistributable 2017	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
Microsoft Visual C++ Redistributable 2015																	
Microsoft Visual C++ Redistributable 2013	✓																
Virtualization																	
Microsoft App-V 5.1	√34																
Microsoft Hyper-V (Server)	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VMware ESXi Hypervisor Server 6.x (Server)	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
VMWare vSphere Enterprise Plus																	
Microsoft Terminal Services (Desktop)	✓	✓	√	√	✓	✓	✓	✓	✓	✓	✓	✓	✓	√	✓	✓	
Citrix XenApp 7.18 (Desktop)	✓	✓	✓	✓	✓	✓	✓					✓	✓	√	✓	✓	
Web Browsers																	
Internet Explorer 11				✓				√	✓			✓	\checkmark				\checkmark
Microsoft Edge ²⁵																	
Google Chrome Evergreen Version 75+				√				✓	✓	✓	✓		\checkmark				
Firefox																	
Chrome on iOS 12+ for iPad Support				√											_		
Safari on iOS 13+ for iPad Support+A86																	
Security Components/Services																	
Aspen Framework (AFW) 5	✓	\checkmark	\checkmark	\checkmark	✓			✓	✓	✓	✓	✓	\checkmark			\checkmark	
Java App (Servers)																	

Suite							Manuf	acturing	g & Sup	ply Cha	in Suite						
							Manufa	acturing	Executio	n System	ıs (MES)						
V12 Platform Specifications that are supported	Manufacturing Execution Systems (MES) Desktop Apps	Manufacturing Execution Systems (MES) Admin Tools 32-	aspenONE Web Server 64bit	aspenONE Process Explorer Client (A1PE)	InfoPlus.21 (IP.21) Server	Batch Interfaces	Cim-IO Interfaces	Plant Operations 32- bit (ATOMS Server)	Plant Operations 32- bit (ATOMS Client)	Plant Operations 32- bit (AORA Server)	Plant Operations 32- bit (AORA Client)	Aspen Production Record Manager (APRM) Server	Aspen Production Execution Manager (APEM) Server	Aspen Infrastructure(ADSA)	aspenONE Integration Foundation: EIF	aspenONE Integration Foundation:mMDM	Aspen Role Based Visualization 64-bit
Apache Tomcat 9.0+			✓										✓				
Native Web Servers																	
IIS 10			✓					✓	✓	✓	✓		\checkmark			\checkmark	\checkmark
IIS 8.5			✓					✓	✓	✓	✓		✓			✓	✓
Reporting Services								<u>'</u>		L							
Microsoft Report Viewer 2015																	1
Microsoft SQL Server 2012/2014/2016/2017/ 2019 Reporting Services																	
Load Balancing																	
F5 Load Balancing				\checkmark													1
Integration Components	1							ı	<u> </u>	ı	ı	<u> </u>	ı				
Aspen Supply Chain Connect																	
Informatica Powercenter 10.4																	
Cloud Support *										ı	ı						
Azure VM - Microsoft		√	✓		✓												
Amazon VM (AWS)																	
Azure VM - Linux																	1
Nutanix XiFrame																	
Virtual Apps Essentials																	
Windows Virtual Desktop (WVD Fall 2019 Release) 27																	
Deployment Tools																	
SCCM	√29																
Supported Versions of Fortran																	
FORTRAN 2019																	
Container Support																	
Docker Engine-Enterprise 19.03.x																	
Docker Compose 1.26x																	
Desktop Types - Minimum Recommended																	

Suite							Manuf	acturing	g & Sup	ply Cha	in Suite						
							Manufa	acturing	Executio	n System	ns (MES)						
V12 Platform Specifications that are supported	Manufacturing Execution Systems (MES) Desktop Apps	Manufacturing Execution Systems (MES) Admin Tools 32-	aspenONE Web Server 64bit	aspenONE Process Explorer Client (A1PE)	InfoPlus.21 (IP.21) Server	Batch Interfaces	Cim-IO Interfaces	Plant Operations 32- bit (ATOMS Server)	Plant Operations 32- bit (ATOMS Client)	Plant Operations 32- bit (AORA Server)	Plant Operations 32- bit (AORA Client)	Aspen Production Record Manager (APRM) Server	Aspen Production Execution Manager (APEM) Server	Aspen Infrastructure(ADSA)	aspenONE Integration Foundation: EIF	aspenONE Integration Foundation:mMDM	Aspen Role Based Visualization 64-bit
Type I: Computer & processor: Intel Core-i5 family or faster Memory (RAM): 16 gigabytes (GB) RAM Hard Disk: 120 gigabytes (GB) available Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor Network: 100MB/Sec	√	√		√		√	√	√	✓	√	√			√	√	√	
Type II: Computer & processor: Intel Core-i5 family or faster Memory (RAM): 16 gigabytes (GB) RAM Hard Disk: 250 gigabytes (GB) available Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor Network: 100MB/Sec																	
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): 16 or above gigabytes (GB) RAM for standalone deployment, 32 or above gigabytes (GB) RAM for multi-user environment Hard Disk: 150 gigabytes (GB) available for standalone deployment, 300 gigabytes (GB) for multi-user environment Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor Network: 100MB/Sec						✓	✓	✓	√	√	√	✓	√				
Type II: Computer & processor: Intel Xeon Gold series type system (4 cores) or faster Memory (RAM): 16 or above gigabytes (GB) RAM Hard Disk: 300 gigabytes (GB) or more available Monitor: Graphics hardware acceleration requires a DirectX10 graphics card and a 1440 x 900 or higher resolution monitor Network: 100MB/Sec (Gigabyte network recommended)					√32												
Type III: Computer & processor: Intel Cascade Lake-based Xeon processor with 8 cores or more per processor Memory (RAM): 32 or above gigabytes (GB) RAM Hard Disk: 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: 100MB/Sec (Gigabyte network recommended)			✓		√												✓
Type IV: (IloT Gateways) Computer & processor: ARM or Intel based CPU or more Memory (RAM): 256Mb or more Hard Disk: 128Mb 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 (MB/s): Minimum: 50, Recommended: 100																	

Suite	Manufacturing & Supply Chain Suite														
	Manufacturing Execution Systems (MES)														
V12 Platform Specifications that are supported	Manufacturing Execution Systems (MES) Desktop Apps Manufacturing Execution Systems (MES) Desktop Apps Manufacturing Execution Systems (MES) Admin Tools 32- aspenONE Process Explorer Client (AIPE) InfoPlus 21 (IP 21) Server Batch Interfaces (Im-IO Interfaces (Im-IO Interfaces Batch Interfaces (Im-IO Interfaces Batch Interfaces (Im-IO I														
* 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.	Manufacturing Execution Systems (MES) suite consists of the following products: InfoPlus.21 (IP.21), Process Explorer, aspenONE Process Explorer, Aspen Production Record Manager (APRM), Aspen Production Execution Manager (APEM), Role-Based Visualization (RBV), Aspen Operations Reconciliation and Accounting (AORA), and Aspen Tank and Operations Manager (ATOM). that														
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.	ss														
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 V12 product.															
If running standalone, 1280 x 800 is the minimum recommended resolution monitor for servers.															
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.	_														
1 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 Modeler family supports FORTRAN compiler version 2020

ivaluation (EE). Primavera is owned by Oracle and its API uses Java.

Must be in compatibility mode for Aspen Process Sequencer

fully supported by ABPD.

2014 is required

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

Oracle or AdoptOpenJDK Java is needed if the 3rd party scheduling application Primavera is used with Economic

When Aspen Utility model is driven by Aspen Online using Local System Account, then SQL Express 2014 is equired.

When Exchanger Design and Rating is driven by Aspen Online using Local System Account, then SQL Express

Suite							Manut	facturin	g & Sup	ply Cha	in Suite			
	Manufacturing Execution Systems (MES)													
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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 Server														
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														
13 Refer to KB 47648 For more information on configuring SCM products using Azure: https://esupport.aspentech.com/S_Article?id=000047648														
14 Only Web Download Excel Add-in requires Excel.														
15 Users need to install both the 32-bit and 64-bit Oracle Clients 19.x for building and running reports														
Non-English OS's are not supported														
17 If using IBM Maximo Adapter														
18 If using aspenONE Exchange on Windows Server 2012 R2, you must select the Desktop Experience option during Windows installation to enable Flash training videos.														
19 SLM supported in cloud (Azure VM/Amazon VM) for ENG products that are supported in the cloud														
20 If FIPS is enabled, aspenONE Exchange users must have the latest Windows Update patches installed on their machine.														
Office 365 - 32-bit support only														
Server-grade systems are not required but still supported.	1													
Browser Support as it relates to Knowledge Delivery only (for +A)														
ATOMS Web does not support Oracle	1													
Only the version of MS Edge that uses the Google Chrome engine is supported	1													
Maestro supports Windows Server 2019 version 1809+	1													

WVD Certification Notes –

SCCM support for APEx only

. Publishing WVD apps to users local machine start menu not supported
. Interoperability with 3rd party products only supported with Office 365
. Aspen Properties Enterprise Database (APED) via SQL Server not supported
. The following products have not been certified for WVD. ABE, ABPD, AQL, AVCA

28
APEM does not support CDB-PDB database in Oracle 12.2.
Weigh & Dispense Client 32-bit does not support Oracle

APM Insights must be installed on the same server as AEI.

Suite	Manufacturing & Supply Chain Suite									
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V12 Platform Specifications that are supported	Manufacturing Execution Systems (MES) Desktop Apps Manufacturing Execution Systems (MES) Admin Tools 32- aspenONE Web Server G4bit Server G6bit Server G6bit Server G6bit Server G7bit Server G7bit Server G7bit Server G7bit Server G7bit MARM Server Plant Operations 32- bit (AORA Server) Aspen Production Record Manager (APEN) Server Aspen Production Record Manager (APEN) Server Aspen ONE Integration Foundation: EIF Aspen Roundation: Manager Aspen Roundation: Manager Aspen Roundation: Manager Aspen Roundation: Manager Aspen Role Based Visualization 64-bit									
31 Express version not recommended for production due to 10GB limitation										
Type II is the minimum recommended when IP.21 is used with MES Collaboration.										
Azure support is available with V12 CP1										

user machines. 4/7/2022

34 APP-V is only supported with Process Explorer

35
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 considered a starting point for large multi-