Suite	Manufacturing & Supply Chain Suite										
	Manufacturing Execution Systems (MES)										
V11 Platform Specifications that are supported	Manufacturing Execution Systems (MES) Desktop Apps	Manufacturing Execution Systems (MES) Admin Tools	aspenONE Process Explorer Server 64bit	aspenONE Process Explorer Client	InfoPlus.21 (IP.21) Server	Interfaces [11]	Plant Operations 32-bit (ATOMS/AORA)	Aspen Production Record Manager (APRM) Server	Aspen Production Execution Manager (APEM) Server	Weigh & Dispense Client 32-bit	Aspen Role Based Visualization 64-bit
Operating Systems (64-bit only)											
Windows 10 Anniversary Enterprise & Professional (64-bit)	✓	✓		✓		✓	✓			✓	
Windows 8.1 Update 1 Enterprise & Professional (64-bit)	✓	✓		✓		✓	✓			✓	
Windows 7 Enterprise & Professional SP1 (64-bit)	✓	✓		✓		✓	✓			✓	
Windows Server 2019 [22]			✓		✓						
Windows Server 2016	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Windows Server 2012 R2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
Windows Server 2008 R2 SP1	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ubuntu Server Edition 16.04 LTS											
Advantech Smart Swarm 2.2.2											
Advantech Smart Router Series coLinux											
Safari on iOS 11+ for iPad Support											
Microsoft Office											
Office 365 (Desktop/Click-to-run)	✓	✓					✓[21]			✓	
Office 2019 (64-bit)	✓	✓									
Office 2019 (32-bit)	✓	✓					✓			✓	
Office 2016 (64-bit)	✓	✓									
Office 2016 (32-bit)	✓	✓					✓			✓	
Office 2013 SP1 (32-bit)	✓	✓					✓			✓	
Office 2010 SP2 (32-bit)	✓	✓					✓			✓	
Database Servers											
Microsoft SQL Server 2017 (Enterprise/Standard Edition)					✓	✓	✓	✓	✓	✓	
Microsoft SQL Server 2017 (Express Edition)											
Microsoft SQL Server 2016 SP1 (Enterprise/Standard Edition)					✓	✓	✓	✓	✓	✓	
Microsoft SQL Server 2016 SP1 (Express Edition)											
Microsoft SQL Server 2014 SP2 (Enterprise/Standard Edition)					✓	✓	✓	✓	✓	✓	
Microsoft SQL Server 2014 SP2 (Express Edition)											
Microsoft SQL Server 2012 SP3 (Enterprise/Standard Edition)					✓	✓	✓	✓	✓	✓	
Microsoft SQL Server 2012 SP3 (Express Edition)											

V11 Platform Specifications that are supported	Manufacturing & Supply Chain Suite										
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SQL Server Local DB											
SQL Server 2012 Analysis Services											
Oracle Database 12.2.x 64-bit					✓	✓	✓	✓	✓[28]		
Oracle Database 11.2.x 64-bit					✓	✓	✓	✓	✓[28]		
Database Clients											
Microsoft SQL Server 2017 (Express Edition)											
Microsoft SQL Server 2016 SP1 (Express Edition)											
Microsoft SQL Server 2014 SP2 (Express Edition)											
Microsoft SQL Server 2012 SP2 (Express Edition)											
Microsoft SQL Server 2008 R2 SP3 (Express Edition)											
Oracle Client 18.3 32-bit											
Oracle Client 18.3 64-bit											
Oracle Client 12.1.0.2 32-bit	✓	✓			✓	✓	✓	✓	✓		
Oracle Client 11.2.0.4 32-bit	✓	✓			✓	✓	✓	✓	✓		
Oracle Client 12.2.x 64-bit	✓	✓			✓	✓	✓	✓	✓		
Oracle Client 11.2.x 64-bit	✓	✓			✓	✓	✓	✓	✓		
Runtimes											
.NET Framework 4.7.1	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
.NET Framework 4.0											
.NET Framework 3.5											
32-bit Java 8 JRE update 151	✓									✓	
32-bit Java 8 JDK update 151											
64-bit Java 8 JRE update 151	✓		✓						✓		✓
64-bit Java 8 JDK update 151											
64-bit AdoptOpenJDK Java 8 u181			✓						✓		✓
32-bit AdoptOpenJDK Java 8 u181	✓									✓	
MSXML 6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Visual Studio 2013, 2015, 2017	✓	✓			✓	✓	✓	✓	✓		✓
Microsoft Visual C++ Redistributable 2017	✓	✓			✓	✓	✓	✓	✓		✓
Microsoft Visual C++ Redistributable 2015	✓	✓			✓	✓	✓	✓	✓		✓
Microsoft Visual C++ Redistributable 2013											
Visual Studio 2010 Tools for Office Runtime	✓	✓		✓							
Virtualization											
Microsoft App-V 5.1	✓										

V11 Platform Specifications that are supported	Manufacturing Execution Systems (MES) Desktop Apps	Manufacturing Execution Systems (MES) Admin Tools	aspenONE Process Explorer Server 64bit	aspenONE Process Explorer Client	InfoPlus.21 (IP.21) Server	Interfaces 11	Plant Operations 32-bit (ATOMS/AORA)	Aspen Production Record Manager (APRM) Server	Aspen Production Execution Manager (APEM) Server	Weigh & Dispense Client 32-bit	Aspen Role Based Visualization 64-bit
Suite	**Manufacturing & Supply Chain Suite**										
Microsoft Hyper-V (Server)	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
VMware ESX Server 6.x (Server)	✓	✓	✓		✓	✓	✓	✓	✓	✓	✓
Microsoft Terminal Services (Desktop)	✓	✓			✓	✓		✓	✓	✓	
Citrix XenApp 7.14 (Desktop)	✓	✓	✓	✓	✓	✓		✓	✓	✓	
Web Browsers											
Internet Explorer 11				✓			✓	✓	✓	✓	✓
Microsoft Edge											
Google Chrome Evergreen Version 104+				✓					✓	✓	
Safari on iOS 11+ for iPad Support											
Security Components/Services											
Aspen Framework (AFW) 5	✓	✓	✓		✓		✓	✓	✓	✓	
Non-Domain Security Group			✓								✓
Microsoft Active Directory / Active Directory Domain Services			✓								✓
Java App (Servers)											
Apache Tomcat 8.5+			✓						✓	✓	
Web Servers											
IIS 10			✓				✓		✓		✓
IIS 8.5			✓				✓		✓		✓
IIS 7.5			✓				✓		✓		✓
Reporting Services											
Microsoft Report Viewer 2010 SP1											
Microsoft SQL Server 2008 R2/2012/2014/2016/2017 Reporting Services											
Crystal Reports 8.5							✓				
Crystal Reports 11											
Malware Blocking Features											
DEP-Data Execution Prevention	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Integration Components											
Aspen Supply Chain Connect											
Informatica Powercenter 10.2 HF1											
Cloud Support *											
Azure VM - Microsoft	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	

Suite	Manufacturing & Supply Chain Suite										
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Amazon VM (AWS)	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Azure VM - Linux											
Windows Virtual Desktop (WVD Fall 2019 Release) [27]											
Nutanix XiFrame											
Azure Virtual Apps Essentials											
Deployment Tools											
SCCM 2016 (version 1606)											
SCCM 2012 R2 SP1											
Built With											
FORTRAN 2017											
Desktop Types - Minimum Recommended											
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 1280 x 1024 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 1280 x 1024 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, 16 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 1280 x 1024 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 1280 x 1024 or higher resolution monitor Network: 100MB/Sec (Gigabyte network recommended)											

Suite	Manufacturing & Supply Chain Suite										
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V11 Platform Specifications that are supported	Manufacturing Execution Systems (MES) Desktop Apps	Manufacturing Execution Systems (MES) Admin Tools	aspenONE Process Explorer Server 64bit	aspenONE Process Explorer Client	InfoPlus.21 (IP.21) Server	Interfaces 11	Plant Operations 32-bit (ATOMS/AORA)	Aspen Production Record Manager (APRM) Server	Aspen Production Execution Manager (APEM) Server	Weigh & Dispense Client 32-bit	Aspen Role Based Visualization 64-bit
Type III: Computer & processor:4 x Intel (8 cores) or faster 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 1280 x 1024 or higher resolution monitor Network: 100MB/Sec (Gigabyte network recommended)			✓		✓						✓
Type IV: (IIoT Gateways) Computer & processor: ARM or Intel based CPU or more Memory (RAM): **256Mb** or more Hard Disk: **128Mb** or more											

Notes

* 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.

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.

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).

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 V11 product.

If running standalone, 1280 x 800 is the minimum recommended resolution monitor for servers.

For SLM server using the Type 1 Desktop configuration, the minimum memory is 4GB with 20GB hard drive.

Microsoft Active Directory/Domain Services (Required for aspenONE Web Server)

[11] CIM-IO Interfaces can be installed on 32-bit desktops

[21] Office 365 - 32-bit support only

[22] Requires the latest patches of the corresponding AspenTech software

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