

Kentucky Information Technology Standards (KITS)

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EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
2020	Open Source Software (OSS)	<p>Open Source Software (OSS) is defined as "computer software for which the source code and certain other rights normally reserved for copyright holders are provided under a software license that meets the Open Source Definition or that is in the public domain. This permits users to use, change, and improve the software, and to redistribute it in modified or unmodified forms. (Wikipedia).</p> <p>Agencies are responsible for support of any OSS products they implement unless a written support agreement is in place between the agency and COT. Agencies should also thoroughly test all OSS products for both functionality and especially security, in a Test and/or QA environment before implementing in production.</p> <p>NOTE: One of the driving forces behind the utilization of OSS is an expectation of considerable cost savings as opposed to a closed source or vendor- owned software solution. Gartner research shows that the reality of cost optimization will vary from one open source solution to another but that approximately half of OSS adopters do not enjoy measurable cost savings. This depends in large part on the maturity of the IT organization, employee skills sets and the organization's ability to self- support OSS implementations. OSS products are required to undergo the same acceptance criteria for utilization in the Commonwealth's</p>	B10.813.327	General Government > Support delivery of state services > Enterprise Licenses and Software	Enterprise Licenses and Software includes License Management and Software Distribution; it supports the purchase, upgrade and tracking of legal usage contracts for system software and applications and supports the propagation, installation and upgrade of written computer programs, applications and components.	<p>Agencies desiring to utilize OSS products as an enterprise level solution and that are not listed as approved enterprise standards must submit an Exception request to the ITSC for consideration through the established process.</p> <p>Approved open source products are listed within each specific domain's category(ies). An Enterprise System (level) is one that provides critical function to an organization and meets at least two of the following characteristics: 1. Provide primary operational services to an organization and/or its customer base; 2. Provides primary operational services across more than one group within an organization; 3. Provides primary operational services on which other applications and/or business operations often are dependent.</p>	<p>Effective: 9/16/2009</p> <p>Revised: 6/17/2015</p> <p>Reviewed: 6/17/2015</p>

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2020		<p>Executive Branch as Closed Source products.</p> <p>Security issues related to OSS products are similar to those related to proprietary software, in that vulnerabilities may be discovered by the vendor or community after implementation. Vendor software is more likely to have a set maintenance schedule for updates, security issues and bug fixes. Because of the large community supporting mature OSS products, fixes may be available in a more timely fashion.</p>					

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
2030	Freeware	<p>Freeware is defined as “computer software that is available for use at no cost or for an optional fee. Freeware is generally proprietary (or closed source code) software available at zero price. The author usually restricts one or more rights to copy, distribute, and make derivative works of the software.” (Wikipedia).</p> <p>One of the driving forces behind the utilization of freeware is an expectation of significant cost savings as opposed to a closed source or vendor-owned software solution. However, freeware lacks guaranteed long-term support from a software vendor. Because the source code is also not usually open to review or modification, the opportunity exists for embedded malicious code to allow unacceptable risks to the overall security of the Commonwealth infrastructure.</p>	B10.813.327	General Government > Support delivery of state services > Enterprise Licenses and Software	Enterprise Licenses and Software includes License Management and Software Distribution; it supports the purchase, upgrade and tracking of legal usage contracts for system software and applications and supports the propagation, installation and upgrade of written computer programs, applications and components.	<p>Agencies desiring to utilize Freeware products as an enterprise level solution, and that are not listed as approved enterprise standards, must submit an Exception request to the ITSC for consideration through the established process. Approved freeware products (if any) are listed within each specific domain’s category(ies). Freeware software (including additional features) in these categories needs to be evaluated for adware, spyware, or malware before installation.</p> <p>An Enterprise System (level) is one that provides critical function to an organization and meets at least two of the following characteristics: 1. Provide primary operational services to an organization and/or its customer base; 2. Provides primary operational services across more than one group within an organization; 3. Provides primary operational services on which other applications and/or business operations often are dependent.</p>	<p>Effective: 9/16/2009</p> <p>Revised: 6/17/2015</p> <p>Reviewed: 6/17/2015</p>

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2040	Shareware	Shareware is defined as “proprietary software that is distributed without payment on a trial basis and is often limited by any combination of functionality, availability or convenience. Shareware is often offered as a download from an Internet website or as a compact disc included with a periodical such as a newspaper or magazine. The aim of shareware is to give buyers the opportunity to use the program and judge its usefulness before purchasing a license for the full version of the software. Shareware is usually offered as a trial version with certain features only available after the license is purchased, or as a full version, but for a trial period. Once the trial period has passed the program may stop running until a license is purchased. Shareware is often offered without support, updates, or help menus, which only become available with the purchase of a license. The words "free trial" or "trial version" are indicative of shareware.” (Wikipedia). One of the driving forces behind the utilization of shareware is an expectation of examining the functionality of the software package without purchasing it. However, shareware frequently does not always provide full functionality as opposed to the fully licensed version.	B10.813.327	General Government > Support delivery of state services > Enterprise Licenses and Software	Enterprise Licenses and Software includes License Management and Software Distribution; it supports the purchase, upgrade and tracking of legal usage contracts for system software and applications and supports the propagation, installation and upgrade of written computer programs, applications and components.	Agencies desiring to utilize Shareware products as an enterprise level solution, and that are not listed as approved enterprise standards, must submit an Exception request to the ITSC for consideration through the established process. Approved shareware products (if any) are listed within each specific domain’s category(ies). Shareware software (including additional features) in these categories needs to be evaluated for adware, spyware, or malware before installation. An Enterprise System (level) is one that provides critical function to an organization and meets at least two of the following characteristics: 1. Provide primary operational services to an organization and/or its customer base; 2. Provides primary operational services across more than one group within an organization; 3. Provides primary operational services on which other applications and/or business operations often are dependent.	<p>Effective: 9/16/2009</p> <p>Revised: 6/17/2015</p> <p>Reviewed: 6/17/2015</p>

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2050	Cloud Computing	<p>Cloud computing is defined as “a style of computing in which massively scalable IT-enabled capabilities are delivered ‘as a service’ to multiple customers using Internet Technology.” (Gartner) Cloud computing services often provide common business applications (email, document create, etc) online that are accessed from a web browser, while the software and data are stored on the service provider’s servers.</p> <p>One of the driving forces behind the utilization of “the cloud” is an expectation of significant cost savings as opposed to a closed source or vendor-owned software solution. However, cloud computing currently lacks security and privacy guarantees necessary to support much of government’s internal functions. Some concerns that are not fully defined include, but are not limited to: the physical location of the data (U.S. vs. overseas), sanitation of equipment prior to disposal, security vulnerabilities of the applications themselves, security vulnerabilities of data in transit, and audit logging and regulatory compliance become very prohibitively complex. A lack of standards within the industry, at the present time, creates unacceptable levels of risks to the overall security of the Commonwealth’s data.</p> <p>Recordkeeping implications of Cloud Computing are examined by KDLA in the document named 'Cloud Computing: Implications and Guidelines for Records Management in Kentucky State Government' which is available at "http://kdla.ky.gov/records/Documents/Cloud%20Computing%20Guidelines%2</p>	B10.802.354	General Government > Executive direction and management > IT Strategy and Innovation	IT Strategy and Innovation includes all activities outside of normal Strategic Planning that focus on trying new approaches, new systems and thinking about/ planning IT investments in different ways.	<ul style="list-style-type: none"> • iConstituent’s Signal CRM • CattleMax • Jurisdiction Online <p>Agencies desiring to utilize Cloud Computing products as an enterprise level solution must submit an Exception request to the ITSC for consideration through the established process. An Enterprise System (level) is one that provides critical function to an organization and meets at least two of the following characteristics: 1. Provide primary operational services to an organization and/or its customer base; 2. Provides primary operational services across more than one group within an organization; 3. Provides primary operational services on which other applications and/or business operations often are dependent.</p>	<p>Effective: 9/16/2009</p> <p>Revised: 11/15/2016</p> <p>Reviewed: 11/15/2016</p>

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2050		0Version%201.pdf"					
2100	Operating System (O/S) – Desktop and Laptop / Notebook	32-bit or 64-bit operating system with graphical user interface for Intel processor compatible platform.	I01.002.203	Platform > Operating System > Personal Computer	For personal computers, operating systems are generally tailored to the needs of users on standalone machines that may or may not connect to a network, and are generally not servers of information to large numbers of other machines.	<ul style="list-style-type: none"> • Microsoft Windows 8.1 Enterprise - Windows 8.1 (32 bit and 64 bit) is approved as a standard product. Agencies must test existing applications thoroughly before migrating to Windows 8.1. Hardware must meet all requirements • Microsoft Windows 7 Enterprise - Windows 7 SP1 (32 bit and 64 bit) is approved as a standard product. Agencies must test existing applications thoroughly before migrating to Windows 7 SP1. Hardware must meet all requirements. 	<p>Effective: 7/1/1997</p> <p>Revised: 1/7/2016</p> <p>Reviewed: 1/7/2016</p>

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2110	Operating System – Server	For zSeries enterprise servers: POSIX compliant 64-bit operating system. For RISC platforms: POSIX compliant 64-bit operating system. For Intel platforms: 32-bit or 64-bit operating system.	I01.002.201	Platform > Operating System > Server – Mainframe or Supercomputer	A mainframe or supercomputer operating system is, in simplest terms, a collection of programs that manage a computer system's internal workings - its memory, processors, devices, and file system. Mainframe operating systems are tailored to meet the substantially different architectures and purposes of mainframes as high-volume transaction processing devices, or the purposes of supercomputers as high-volume algorithmic processors.	<ul style="list-style-type: none"> • IBM AIX 6.1 and newer • IBM AIX 5.3 moved to EOS (End of Support) April, 2012. Any remaining customer systems on 5.2 are charged for extended support. • IBM z/OS • Microsoft Windows 2012 Server • Microsoft Windows 2008 Server R2 • Oracle Solaris • Red Hat Linux 5.6 and newer • UNIX 	<p>Effective: 7/1/1997</p> <p>Revised: 1/7/2016</p> <p>Reviewed: 1/7/2016</p>

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2110	Operating System – Server	For zSeries enterprise servers: POSIX compliant 64-bit operating system. For RISC platforms: POSIX compliant 64-bit operating system. For Intel platforms: 32-bit or 64-bit operating system.	I01.002.202	Platform > Operating System > Server – Midrange	A midrange computer operating system is, in simplest terms, a collection of programs that manage a computer system's internal workings - its memory, processors, devices, and file system. Midrange computers are almost universally known as servers to recognize that they often "serve" applications to end users at "client" computers, that they use a client/server computing model.	<ul style="list-style-type: none"> • IBM AIX 6.1 and newer • IBM AIX 5.3 moved to EOS (End of Support) April, 2012. Any remaining customer systems on 5.2 are charged for extended support. • IBM z/OS • Microsoft Windows 2012 Server • Microsoft Windows 2008 Server R2 • Oracle Solaris • Red Hat Linux 5.6 and newer • UNIX 	<p>Effective: 7/1/1997</p> <p>Revised: 1/7/2016</p> <p>Reviewed: 1/7/2016</p>

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2200	Remote Desktop Control Software	<p>Requires a PPP TCP/IP based connection. All transmissions must be encrypted using the Secure Sockets Layer (SSL) protocol, and require a non-anonymous login before establishing the session connection.</p> <p>Remote Desktop Control Software is grouped into three categories, depending on its intended purpose:</p> <ul style="list-style-type: none"> • Single User (a user accesses their workstation desktop remotely) • Multi User (many users execute applications remotely) • Remote Administration (system administrators' access user workstations in order to debug problems and make configuration changes). 	A02.030.KY003	Application Components > Unified Communications and Collaboration > Remote Desktop Control	Software for controlling a computer remotely via another device that's connected through a network or the Internet. Remote desktop software enables the user to see and control a connected PC as though they are sitting directly in front of it.	<p>Single User:</p> <ul style="list-style-type: none"> • Symantec pcAnywhere Not approved for new installs. • Windows Remote Desktop Services <p>Multi User:</p> <ul style="list-style-type: none"> • Citrix (GoToMeeting, GoToWebinar, GoToTraining, XenApp) • Remote Desktop Services (formerly Windows Server 2008 Terminal Services) • Windows Server Terminal Services <p>Remote Administration:</p> <ul style="list-style-type: none"> • Client Management Suite (Symantec) • DameWare • LANDesk • Microsoft System Center Configuration Manager (SCCM) • Microsoft System Management Server (SMS) • Windows Remote Assistance feature • Webex • Cygwin 	<p>Effective: 7/1/1997</p> <p>Revised: 1/28/2016</p> <p>Reviewed: 4/8/2016</p>

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2210	Host Print	TCP/IP host printing	I01.005.506	Platform > Virtualization > Print Server	Print server virtualization extends the virtualization concept to the access to and management of print resources. For the purposes of the IRM, a print server can be a dedicated device, a standalone computer, specialized software, or some combination that handles receipt, queuing, delivery, and status of print jobs for printers on the network.	Brooks Remote Print Manager (RPM)	Effective: 7/1/1997 Revised: 12/1/2008 Reviewed: 6/17/2015

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2250	Barcoding Software	<p>Software must adhere to the following: Barcode Support:</p> <ul style="list-style-type: none"> • Industry standard adherence • Precise bar width specification • Stretchable Bar Width specification • Database integration barcodes • Advanced Serialization • Sequentially Numbered Bar Codes • Print-time Data Prompt • Start/Stop character specification • Human readable text options • Automatic Check Digit • Wide-to-narrow bar specification • Fixed Data Source • Human Readable Text Formatting • Variable Data Source - database and counter <p>(2D) Industry Standard:</p> <ul style="list-style-type: none"> • PDF417 (Truncation, ECC Level, Data Columns) • Micro PDF417 • Data Matrix (Square and Rectangular) • QR • Micro QR (Linear) <p>Standard:</p> <ul style="list-style-type: none"> • Australian Post 4-State • CODE128 (Auto) • CODE128 (A, B, C) • CODE39 • CODE39 FULL ASCII • CODE93 • EAN13 (with extension support) • EAN8 (with extension support) • HIBC • GS1-128 • GS1 DataBar-14 • GS1 DataBar Limited • GS1 DataBar Stacked • GS1 DataBar Stacked Omnidirectional • GS1 DataBar Truncated • I2OF5 • Circular I2OF5 • ISBN (with extension support) • ISBN 13 (with extension support) • ISMN • ISSN (with extension support) • MSI • POSTNET • RATIONAL CODABAR • RSS14 • RSS14 Limited 	A02.031.381	Application Components > Visualization > Charting	Software to develop graphical representation of data in which the data is represented by symbols such as bars, lines, slices, dots, size, etc.	<p>NOTE: Due to the large number of Barcoding products available, no product standard is listed. However, be advised an Enterprise License is available for TechnoRiver Studio Pro.</p>	<p>Effective: 3/20/2013</p> <p>Revised:</p> <p>Reviewed: 6/17/2015</p>

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2250		<ul style="list-style-type: none"> • RSS14 Stacked • RSS14 Stacked Omnidirectional • RSS14 Truncated • S2OF5 • UCCEAN128 (Full AI Wizard support) • UPCA (with extension support) • UPCE (with extension support) • UPC Extension 2 • UPC Extension 5 • USPS ONECODE 					
2255	Barcode Reader Software	Software to read various types of barcodes	A02.028.KY004	Application Components > Productivity > Miscellaneous Productivity Tools and Utility software	Software used for miscellaneous productivity and utility tasks.	<ul style="list-style-type: none"> • Orca Scan - Bulk Barcode Scanner app for iPhone. 	<p>Effective: 11/2/2016</p> <p>Revised: 12/21/2016</p> <p>Reviewed: 12/21/2016</p>

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2300	Statistical	Software that operates across the range of platforms used by applications in the commonwealth (desktop, midrange, mainframe) that can extract data, store in various formats, can group data, and can perform all required statistical processes and tests.	A02.020.206	Application Components > Analysis, Reporting and Statistics > Mathematical	Software that provides an environment for statistical analysis, predictive and descriptive modeling, data mining, forecasting, optimization, simulation.	<ul style="list-style-type: none"> • SPSS (IBM) • Statistical Analysis System (SAS), available for a number of platforms, including desktop, midrange, and mainframe. • EP Evaluator - Laboratory statistics program used for clinical laboratory method evaluation, validation and quality assurance. • ProMiles (Government Version) - software to verify compliance with approved jurisdictional mileages for the trucking industry. 	<p>Effective: 7/1/1997</p> <p>Revised: 11/9/2016</p> <p>Reviewed: 11/9/2016</p>
2310	Business Intelligence Software	BI software capable of accessing and integrating data across the diverse range of IT platforms (LAN, departmental, midrange, mainframe) used by applications in the commonwealth, and that can query and extract data, analyze data, group data, store in various formats and can perform all required analytical processes and tests.	A02.020.202	Application Components > Analysis, Reporting and Statistics > Business Intelligence	Software to support identifying, extracting, and analyzing business data, such as performance and cost metrics to support better business decision-making.	<ul style="list-style-type: none"> • BusinessObjects Software Suite from SAP • Tableau 	<p>Effective: 11/1/2005</p> <p>Revised: 7/5/2016</p> <p>Reviewed: 7/5/2016</p>

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2330	Electronic Documents – Final Version for Distribution	<p>Portable Document Format (PDF) is the approved format for the creation of final official copies of records for distribution.</p> <p>NOTE: PDF/A, ISO 19005-1:2005 (archival) is the required format for long term document storage to comply with KDLA requirements.</p> <p>PDF, ISO 32000-1:2008 (non-archival) is the standard for short term document storage where archival storage is not a requirement.</p>	A02.023.265	Application Components > Document and Content Management > Records Management	Software that supports the management and stewardship of a type of information by the government in order to facilitate communication and information archival.	NOTE: Due to the large number of products now capable of producing electronic forms, no product standard is listed.	<p>Effective: 3/5/1999</p> <p>Revised: 1/18/2012</p> <p>Reviewed: 6/17/2015</p>
2340	Electronic Forms	<p>Various trade and industry associations provide guidelines for the development and design of forms; however no de facto standards exist for electronic forms. Standards do exist for the interface with other applications and these must be followed:</p> <ul style="list-style-type: none"> • compliant for links to approved databases • MAPI compliant for use with Microsoft Exchange messaging system • TCP/IP compliant for Internet distribution • Microsoft Internet Explorer, Mozilla Firefox and Google Chrome compliant 	A02.023.263	Application Components > Document and Content Management > Forms Management	Software that supports the creation, modification, and usage of physical or electronic documents used to capture information within the business cycle.	<ul style="list-style-type: none"> • OpenText Exstream (formerly known as HP Exstream). 	<p>Effective: 3/5/1999</p> <p>Revised: 12/22/2016</p> <p>Reviewed: 12/22/2016</p>

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2370	Electronic Commerce – Electronic Signature	<p>KRS 369.101 to 369.120 -Uniform Electronic Transactions Act (UETA as enacted by the 2000 General Assembly).</p> <p>IETF (Internet Engineering Task Force) X.509 Public Key Infrastructure (PKI latest version for digital certificates)</p> <p>Interoperates and fully supports critical enterprise infrastructure services and applications such as network protocols, desktop operating systems, e-mail, web servers, database management software, firewalls and directory services.</p> <p>Symmetric encryption algorithms required for securing content: U.S. Data Encryption Standard (DES) in accordance with U.S. FIPS PUB 46-2 and ANSI X3.92 and Triple-DES in accordance with ANSI X9.52</p> <p>Also refer to the KY Department of Libraries and Archives “Understanding Records Management: Electronic Records” web page. Under the “Guidance” heading select “Electronic Signature Recordkeeping guidelines”.</p>	A02.029.341	Application Components > Security Controls > Digital Signature	Software to use and manage electronic signatures to support.	<ul style="list-style-type: none"> • Entrust suite of PKI enabled products for digital signature technology and securing e-mail transport of content and attachments. • Microsoft Forefront Identity Manager 2010 • Silanis e-Sign Desktop provides a solution for electronically signing documents and routing for approval via workflow. 	<p>Effective: 7/1/1997</p> <p>Revised: 1/18/2012</p> <p>Reviewed: 6/17/2015</p>

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2400	Database Management Software	ANSI SQL-92	A02.021.226	Application Components > Data Management > Database Management System	Software that supports the storage, modification, extraction, and search for information within a database.	<p>Enterprise Database Servers:</p> <ul style="list-style-type: none"> • UNIX/Linux platform: IBM DB2, Oracle, MySQL ** • Windows platform: MySQL ** • Wintel platform: Microsoft SQL Server, and Oracle • z/OS platform: IBM DB2 • Big Data: Cloudera Enterprise <p>** Agency Advisory – MySQL is currently NOT supported by the Commonwealth Office of Technology (COT). Agencies must take this under advisement when considering use for Enterprise Applications and/or critical data.</p> <p>Desktop Databases: NOTE: The development and use of desktop databases is discouraged because of the stated architectural direction to share data on common server platforms.</p> <ul style="list-style-type: none"> • FileMaker Pro • IBM DB2 Personal Edition - For development use only. • Microsoft Access: <ul style="list-style-type: none"> - 2013 version extended support ends 04/11/2023; - 2010 version extended support ends 10/13/2020; - 2007 version extended support ends 10/10/2017. • Microsoft SQL Express • Oracle Database Express Edition (Oracle Database XE) 11g or higher 	<p>Effective: 7/1/1997</p> <p>Revised: 8/24/2015</p> <p>Reviewed: 8/24/2015</p>

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2500	Office Suite - Desktop and Notebook / Laptop	Supported by the approved operating systems for desktop and notebook computers. Graphical User Interface functionality and compatibility among all tools in the office suite. Integrated import and export support.	A02.028.KY001	Application Components > Productivity > Office Suite	Software suite used for word processing, spreadsheet, presentation etc. This category is for application components that performs multiple functions.	<ul style="list-style-type: none"> Microsoft Office: For documents that interact with eMARS Advantage Financial and Procurement, Office 2013, 2010 or 2007 is required. <ul style="list-style-type: none"> - 2016 version. Approved for use with Office 365. - 2013 version. Extended support slated to end on 04/11/2023. - 2010 version. Extended support slated to end on 10/13/2020. - 2007 version: Extended support slated to end on 10/10/2017. 	<p>Effective: 7/1/1997</p> <p>Revised: 6/28/2016</p> <p>Reviewed: 6/28/2016</p>
2600	Electronic Mail, Messaging and Collaboration	<ul style="list-style-type: none"> Messaging Application Programming Interface (MAPI) Simple Mail Transport Protocol (SMTP) <p>Also see category for Recordkeeping – Electronic Mail.</p>	A02.030.361	Application Components > Unified Communications and Collaboration > Email	Software that supports the transmission of memos and messages over a network.	<p>Client Software:</p> <p>Microsoft Outlook:</p> <ul style="list-style-type: none"> - 2013 version extended support ends 04/11/2023; - 2010 version extended support ends 10/13/2020; <p>Server Software:</p> <ul style="list-style-type: none"> Avaya Unified Messaging: CallPilot Microsoft Exchange Server 	<p>Effective: 7/1/1997</p> <p>Revised: 6/17/2015</p> <p>Reviewed: 6/17/2015</p>

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2610	Fax Software	Client/server fax software fully integrated with Microsoft Exchange and Outlook client software.	A02.030.KY004	Application Components > Unified Communications and Collaboration > Fax Software	Software used for sending Fax from Outlook (Exchange) Email.	<ul style="list-style-type: none"> Avaya Unified Messaging: CallPilot eCopy (Nuance) Fax2Mail 	<p>Effective: 7/1/1997</p> <p>Revised: 3/18/2016</p> <p>Reviewed: 4/8/2016</p>
2640	FTP and Secure FTP Server	Any FTP of classified data must be performed utilizing either ftps or sftp. This category only applies to Windows servers. See also the category for Data Classification.	A03.040.011	Interface > Application Interface > FTP	Standard network protocol used to transfer files from one host to another host over a TCP-based network, such as the Internet. File Transfer Protocol (FTP) is built on a client-server architecture and uses separate control and data connections between the client and server.	<ul style="list-style-type: none"> MoveIT DMZ WS_FTP (Ipswitch) 	<p>Effective: 11/18/2009</p> <p>Revised: 6/17/2015</p> <p>Reviewed: 6/17/2015</p>
2650	FTP Client and Secure FTP Client Software	Any FTP of classified data must be performed utilizing either ftps or sftp. Software for use as Client only, Server use requires an Exception request. Clients need to be FIPS compliant for Secure FTP options. See also the category for Data Classification.	A03.040.011	Interface > Application Interface > FTP	Standard network protocol used to transfer files from one host to another host over a TCP-based network, such as the Internet. File Transfer Protocol (FTP) is built on a client-server architecture and uses separate control and data connections between the client and server.	<ul style="list-style-type: none"> Cygwin FileZilla FireFTP PuTTY WS_FTP (Ipswitch) For IRS Secure Data Transfer Axway Secure Client 	<p>Effective: 11/3/2009</p> <p>Revised: 10/26/2016</p> <p>Reviewed: 10/26/2016</p>

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2700	Publishing – Desktop		A02.028.KY002	Application Components > Productivity > Desktop Publishing	Software used for the creation of documents using page layout skills on a personal computer. Desktop publishing software can generate layouts and produce typographic quality text and images comparable to traditional typography and printing. This technology allows individuals, businesses, and other organizations to self-publish a wide range of printed matter (Ref:Wikipedia).	<ul style="list-style-type: none"> • Adobe Creative Suite • Microsoft Publisher: <ul style="list-style-type: none"> - 2013 version extended support ends 04/11/2023; - 2010 version extended support ends 10/13/2020; - 2007 version extended support ends 10/10/2017 • Nuance Power PDF 	<p>Effective: 7/1/1997</p> <p>Revised: 8/17/2016</p> <p>Reviewed: 8/17/2016</p>
2705	HTML Authoring and Web Publishing	World Wide Web Consortium (W3C) standards (HTML 3.2 is an SGML application conforming to International Standard ISO 8879). Full support for HTML 3.2 features as defined by the Internet Engineering Task Force (IETF) and the World Wide Web Consortium (W3C). This is the recommended minimum standard, although HTML 4.0 is the preferred development standard for new applications. See also Application Development category.	A02.023.266	Application Components > Document and Content Management > Web Content Management	Software that provides content authoring, content review and approval, tagging and aggregation, content publishing and delivery, and syndication management.	<ul style="list-style-type: none"> • Adobe Creative Suite • Microsoft Expression <ul style="list-style-type: none"> Only versions currently under mainstream support from Microsoft are authorized for new installation. • Microsoft SharePoint Designer: <ul style="list-style-type: none"> - 2013 version extended support ends 04/11/2023; - 2010 version extended support ends 10/13/2020; - 2007 version extended support ends 10/10/2017 • Microsoft Visual Studio: <ul style="list-style-type: none"> - 2012 version extended support ends 04/11/2023; - 2010 version extended support ends 09/08/2020; - 2008 version extended support ends 04/10/2018 - 2005 version (Not for new installs) extended support ends 04/12/2016 	<p>Effective: 7/1/1997</p> <p>Revised: 6/17/2015</p> <p>Reviewed: 6/17/2015</p>

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2710	Advanced Drawing – Computer Aided Drafting	CAD/CADD software generally comes with component libraries, or has component libraries available from third party sources. These component representations must meet the standards applicable to the particular discipline (i.e., IEEE, etc.). In addition, AutoCAD has developed drawing file formats (DXF and DWG) that have become the de facto standards for CADD systems.	A02.031.383	Application Components > Visualization > Computer Aided Design (CAD)	Software that supports the use of computer technology for the process of design and design-documentation and includes software or environments which provide the user with input-tools for the purpose of streamlining design processes; drafting, documentation, and manufacturing processes.	<ul style="list-style-type: none"> • Entry Level: AutoCAD LT • Full-CADD: AutoCAD (latest version released) 	<p>Effective: 7/1/1997</p> <p>Revised: 6/1/2006</p> <p>Reviewed: 6/17/2015</p>
2720	Advanced Drawing / Illustration / Diagramming		A02.028.330	Application Components > Productivity > Drawing	Software used to create or edit a graphical object.	<ul style="list-style-type: none"> • Adobe Creative Suite • CorelDraw • Microsoft Visio for Diagramming 	<p>Effective: 7/1/1997</p> <p>Revised: 1/19/2011</p> <p>Reviewed: 6/17/2015</p>
2730	Engineering Software	Software used for engineering tasks.	A02.028.KY003	Application Components > Productivity > Engineering Software	Software used for engineering design tasks.	<ul style="list-style-type: none"> • StructurePoint spColumn • Bluebeam Revu • McTrans HCS 2010 - Highway Capacity Software 	<p>Effective: 9/21/2016</p> <p>Revised: 11/9/2016</p> <p>Reviewed: 11/9/2016</p>

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2740	Screen / Video Capture and Editing Software		A02.031.387	Application Components > Visualization > Graphics	Software that enables a person to manipulate static, animated or video visual images on a computer.	<ul style="list-style-type: none"> • Snagit • Camtasia Studio 	<p>Effective: 10/26/2016</p> <p>Revised: 10/26/2016</p> <p>Reviewed: 10/26/2016</p>
2750	Multimedia Software		A02.031.390	Application Components > Visualization > Multimedia	Software to manage, develop and manipulate content from a combination of different content forms such as text, audio, still images, animation, video, or interactivity.	<ul style="list-style-type: none"> • Microsoft Windows Media Player • VLC Media Player 	<p>Effective: 6/13/2016</p> <p>Revised: 6/13/2016</p> <p>Reviewed: 6/13/2016</p>
2790	Miscellaneous Productivity Tools and Utility software		A02.028.KY004	Application Components > Productivity > Miscellaneous Productivity Tools and Utility software	Software used for miscellaneous productivity and utility tasks.	<ul style="list-style-type: none"> • AMYUNI PDF Converter Desktop Edition • Dragon Professional Individual For Electronic Healthcare Data: • 7EDIT - for HL7 messages For EDI: • EDI Notepad v8 For File and Folder Comparison • ExamDiff • Beyond Compare 4 For screen reading to assist visually impaired • JAWS (Job Access With Speech) • FSReader 	<p>Effective: 9/19/2016</p> <p>Revised: 10/26/2016</p> <p>Reviewed: 10/26/2016</p>

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2800	Geographic Information Systems (GIS) – Server Software	Compatible with the approved server operating systems.	A02.024.382	Application Components > Geospatial Information > Collection and Manipulation of Satellite and Aerial Photographs	Software which supports the modification or analysis of imagery information.	ArcGIS Server (Server-based GIS), and ArcSDE (Enterprise-class Geospatial Storage Environment) and its ancillary modules for the Windows Server Environment, from ESRI.	<p>Effective: 7/1/1997</p> <p>Revised: 6/17/2015</p> <p>Reviewed: 6/17/2015</p>
2800	Geographic Information Systems (GIS) – Server Software	Compatible with the approved server operating systems.	A02.024.385	Application Components > Geospatial Information > Geospatial Data Analysis	Supports the application of statistical analysis and other informational techniques to geographically based data.	ArcGIS Server (Server-based GIS), and ArcSDE (Enterprise-class Geospatial Storage Environment) and its ancillary modules for the Windows Server Environment, from ESRI.	<p>Effective: 7/1/1997</p> <p>Revised: 6/17/2015</p> <p>Reviewed: 6/17/2015</p>
2810	Geographic Information Systems (GIS) – Desktop Software	Compatible with approved desktop operating systems. Windows 7 Professional 64-bit is strongly recommended.	A02.024.380	Application Components > Geospatial Information > Cartography	Software that supports the creation of maps.	<ul style="list-style-type: none"> ArcGIS Desktop and its ancillary modules (from ESRI) for Windows 7 Professional 64-bit, and Windows 8.1 Pro and Enterprise 64-bit. Windows 7 Professional 64-bit is the recommended desktop platform. Metadata authoring is carried out using the ArcCatalog module within ArcGIS Desktop. LP360 by GeoCue for LiDAR data. ERDAS Imagine for processing images. 	<p>Effective: 7/1/1997</p> <p>Revised: 8/17/2016</p> <p>Reviewed: 8/17/2016</p>

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2810	Geographic Information Systems (GIS) – Desktop Software	Compatible with approved desktop operating systems. Windows 7 Professional 64-bit is strongly recommended.	A02.024.382	Application Components > Geospatial Information > Collection and Manipulation of Satellite and Aerial Photographs	Software which supports the modification or analysis of imagery information.	<ul style="list-style-type: none"> • ArcGIS Desktop and its ancillary modules (from ESRI) for Windows 7 Professional 64-bit, and Windows 8.1 Pro and Enterprise 64-bit. Windows 7 Professional 64-bit is the recommended desktop platform. Metadata authoring is carried out using the ArcCatalog module within ArcGIS Desktop. • LP360 by GeoCue for LiDAR data. • ERDAS Imagine for processing images. 	<p>Effective: 7/1/1997</p> <p>Revised: 8/17/2016</p> <p>Reviewed: 8/17/2016</p>
2810	Geographic Information Systems (GIS) – Desktop Software	Compatible with approved desktop operating systems. Windows 7 Professional 64-bit is strongly recommended.	A02.024.385	Application Components > Geospatial Information > Geospatial Data Analysis	Supports the application of statistical analysis and other informational techniques to geographically based data.	<ul style="list-style-type: none"> • ArcGIS Desktop and its ancillary modules (from ESRI) for Windows 7 Professional 64-bit, and Windows 8.1 Pro and Enterprise 64-bit. Windows 7 Professional 64-bit is the recommended desktop platform. Metadata authoring is carried out using the ArcCatalog module within ArcGIS Desktop. • LP360 by GeoCue for LiDAR data. • ERDAS Imagine for processing images. 	<p>Effective: 7/1/1997</p> <p>Revised: 8/17/2016</p> <p>Reviewed: 8/17/2016</p>

EAS Code	EAS Category Name	Standard	KITS Category Code	KITS Domain > Area > Category	KITS Description	Approved Products	Date
2810	Geographic Information Systems (GIS) – Desktop Software	Compatible with approved desktop operating systems. Windows 7 Professional 64-bit is strongly recommended.	A02.024.386	Application Components > Geospatial Information > Geospatial Data Collection	Software that supports the collection or management of geospatial information.	<ul style="list-style-type: none"> • ArcGIS Desktop and its ancillary modules (from ESRI) for Windows 7 Professional 64-bit, and Windows 8.1 Pro and Enterprise 64-bit. Windows 7 Professional 64-bit is the recommended desktop platform. Metadata authoring is carried out using the ArcCatalog module within ArcGIS Desktop. • LP360 by GeoCue for LiDAR data. • ERDAS Imagine for processing images. 	<p>Effective: 7/1/1997</p> <p>Revised: 8/17/2016</p> <p>Reviewed: 8/17/2016</p>
2810	Geographic Information Systems (GIS) – Desktop Software	Compatible with approved desktop operating systems. Windows 7 Professional 64-bit is strongly recommended.	A02.024.389	Application Components > Geospatial Information > Imagery	Software that supports the collection of information via satellite and aerial photography.	<ul style="list-style-type: none"> • ArcGIS Desktop and its ancillary modules (from ESRI) for Windows 7 Professional 64-bit, and Windows 8.1 Pro and Enterprise 64-bit. Windows 7 Professional 64-bit is the recommended desktop platform. Metadata authoring is carried out using the ArcCatalog module within ArcGIS Desktop. • LP360 by GeoCue for LiDAR data. • ERDAS Imagine for processing images. 	<p>Effective: 7/1/1997</p> <p>Revised: 8/17/2016</p> <p>Reviewed: 8/17/2016</p>

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2850	Imaging Solution - OCR/ICR Software	OCR software offered by vendors on price contract.	A02.023.260	Application Components > Document and Content Management > Document Imaging and OCR	Software that supports the document scanning and the interpretation of images into text.	OmniPage for standalone OCR. OCR software supplied with approved multifunction products is permitted.	Effective: 7/1/1997 Revised: 6/17/2015 Reviewed: 6/17/2015
2860	Imaging Solution – Workflow Software	Workflow software offered by vendors on price contract.	A02.023.260	Application Components > Document and Content Management > Document Imaging and OCR	Software that supports the document scanning and the interpretation of images into text.	<ul style="list-style-type: none"> • FileNet • KnowledgeLake • Nintex 	Effective: 7/1/1997 Revised: 3/20/2013 Reviewed: 6/17/2015
2870	Imaging Solution - Control Software for Imaging	Imaging control software offered by vendors on price contract.	A02.023.260	Application Components > Document and Content Management > Document Imaging and OCR	Software that supports the document scanning and the interpretation of images into text.	<ul style="list-style-type: none"> • FileNet • KnowledgeLake 	Effective: 7/1/1997 Revised: 3/20/2009 Reviewed: 6/17/2015

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2920	Web Content Management Software	<ul style="list-style-type: none"> • Web Content Accessibility Guidelines (WCAGs) - Priority 1 and Priority 2 published by the World Wide Web Consortium (W3C) • Hypertext Markup Language - HTML 4.01 • Extensible Hypertext Markup Language - XHTML 1.0 • Cascading Style Sheet - CSS Levels 1 & 2 • Document Object Model - DOM Level 1 • Synchronized Multimedia Integration Language - SMIL 2.0 • JavaScript & Dynamic HTML – DHTML • Simple Object Access Protocol (SOAP) <p>Also, see standard category for Internet/WWW Design and Publishing.</p>	A02.023.266	Application Components > Document and Content Management > Web Content Management	Software that provides content authoring, content review and approval, tagging and aggregation, content publishing and delivery, and syndication management.	<ul style="list-style-type: none"> • DotNetNuke – (Must Reference Category 2020 – Open Source Software) • Microsoft Office SharePoint - 2013 version extended support ends 04/11/2023 - 2010 version extended support ends 10/13/2020 - 2007 version extended support ends 10/10/2017 • Sharegate 	<p>Effective: 6/1/2006</p> <p>Revised: 10/26/2016</p> <p>Reviewed: 10/26/2016</p>
2930	E-Learning Software	E-learning software capable of producing rich e-learning content, able to access and integrate content from a diverse range of sources used in commonwealth e-learning applications, capable of supporting student and instructor collaboration, and capable of efficiently delivering content across the Internet.	A01.007.042	System > Human Resource Management > Education / Training	Software that supports the design, development, and implementation of a comprehensive employee development and training approach to ensure that agency employees have the right competencies.	<ul style="list-style-type: none"> • SumTotal Learn for corporate and academic e-learning requirements (eLMS). • Blackboard Academic Suite from Blackboard, Inc. for legacy academic and corporate e-learning requirements (which includes Elluminate). • Articulate eLearning Software • PassAssured Pharmacy Tech Software • Adobe Presenter 	<p>Effective: 4/7/2006</p> <p>Revised: 12/14/2016</p> <p>Reviewed: 12/14/2016</p>

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2940	Help Desk Software	Must support IT Service Management and ITIL processes and provide compatibility with a wide range of products used in supporting IT infrastructure.	A01.002.010	System > Customer Service > Call Center / Help Desk	Software that supports the management of a service center to respond to government and contract employees' technical and administrative questions.	<ul style="list-style-type: none"> • ITSM from Front Range Solutions USA, Inc. • HEAT from Front Range Solutions USA, Inc. • Symantec Service Desk 	<p>Effective: 6/1/2006</p> <p>Revised: 6/17/2015</p> <p>Reviewed: 6/17/2015</p>
2950	Server Virtualization Software		I01.002.202	Platform > Operating System > Server – Midrange	<p>A midrange computer operating system is, in simplest terms, a collection of programs that manage a computer system's internal workings - its memory, processors, devices, and file system. Midrange computers are almost universally known as servers to recognize that they often "serve" applications to end users at "client" computers, that they use a client/server computing model.</p>	<p>For the Wintel server environment:</p> <ul style="list-style-type: none"> • Microsoft Windows Server 2012 • Microsoft Windows Server 2008 R2 Extended support slated to end 7/9/2018. • Microsoft Windows Server 2008 R2 Virtualization with Hyper-V. Extended support slated to end 7/9/2018. • Microsoft Virtual Server 2005 R2 SP1 • VMware from EMC Corp. 	<p>Effective: 6/1/2006</p> <p>Revised: 1/7/2016</p> <p>Reviewed: 1/7/2016</p>
2960	Business Rules Management Software		A02.027.312	Application Components > Process Automation and Management > Business Rule Management	Software used to define, deploy, execute, monitor and maintain the variety and complexity of decision logic that is used by operational systems within an organization or enterprise. This logic, also referred to as business rules, includes policies, requirements, and conditional statements that are used to determine the tactical actions that take place in applications and systems.	<ul style="list-style-type: none"> • Corticon Business Rules Server • Corticon Business Rules Studio 	<p>Effective: 10/26/2016</p> <p>Revised: 10/26/2016</p> <p>Reviewed: 10/26/2016</p>

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2980	Workflow Software		A02.027.KY001	Application Components > Process Automation and Management > Workflow Management	Software used to manage workflows.	<ul style="list-style-type: none"> • K2 Blackpearl 	<p>Effective: 10/26/2016</p> <p>Revised: 10/26/2016</p> <p>Reviewed: 10/26/2016</p>
9994	Vulnerability Scanning and Detection		A01.011.KY001	System > Security Management > Vulnerability Scanning and Detection	Software that scans for vulnerabilities and detects configuration issues	<ul style="list-style-type: none"> • AppDetective 	<p>Effective: 10/19/2015</p> <p>Revised: 10/19/2015</p> <p>Reviewed: 10/19/2015</p>
9995	Modeling		A02.025.285	Application Components > Knowledge and Discovery Management > Modeling	Software to develop descriptions that adequately explain relevant data for the purpose of prediction, pattern detection, exploration or general organization of data.	<ul style="list-style-type: none"> • IBM Rational System Architect • Orbus iServer 	<p>Effective: 8/21/2015</p> <p>Revised: 10/27/2015</p> <p>Reviewed: 10/27/2015</p>
9996	Risk Management		A02.027.322	Application Components > Process Automation and Management > Risk Management	Software that allows planners to explicitly address uncertainty by identifying and generating metrics, setting parameters, prioritizing, and developing mitigations, and tracking risk.	<ul style="list-style-type: none"> • TeamMate AM- Audit Management • RSA Archer Policy Management • RSA Archer Risk Management • RSA Archer Compliance Management 	<p>Effective: 7/23/2015</p> <p>Revised: 11/12/2015</p> <p>Reviewed: 11/12/2015</p>

