IT CLASSIFICATION TECHNOLOGY LIST - ISSUE DATE: June 22, 2015

Technology Definition: A set of knowledge, skills and/or abilities, taking a significant time (e.g. 6 months) to learn, and applicable to the defined classification specification assigned.

Example of Tools: These are examples only for illustration purposes and are not meant to constitute a full and/or comprehensive list.

Classification	Discipline	Technology	Definition	Example of Tools	
DBA	Relational Database	DB2	The relational database management system provided by IBM that runs on Unix, Linux, Windows and z/OS platforms including DB2 Connect and related tools	Omegamon, IBM Admin Tools, Log Analyzer, DB2 Compare, Nsynch, TSM, Universal Command, SQL	
		SQL Server	The relational database management system and related tools provided by Microsoft Corp	SQL Server Mgmt Studio, Red Gate, Vantage, Tivoli, Snap Manager, Toad, Enterprise Manager, SQL	
		ORACLE	The relational database management system and related tools provided by Oracle Corp	Oracle enterprise manager, application express, RMAN, PL SQL, SQL developer, Toad, SQL, MySQL	
		SYBASE	The relational database management system and related tools provided by Sybase	ASE	
		Supra 2.X	Cincom SUPRA SQL – Cincom's relational database management system provides access to data in open and proprietary environments through industry-standard SQL for standalone and client/server application solutions.		
		Open Source	Open Source database management system such as Mysql	Mysql, phpadmin, mysqladmin	
	Hierarchical Database	IMS	The hierarchical database management system provided by IBM that runs on z/OS mainframe platform including related tools	BMC IMS Utilities, Strobe, Omegamon	
		Supra 1	Cincom SUPRA® PDM – Cincom's networked, hierarchical database management system provides access to your data through a Physical Data Manager (PDM) that manages the data structures of the physical files that store the data. Enables administrators to automate the distribution of desktop applications and operating system upgrades, ensuring end user devices are always up to date.		
	Data Warehouse	Data Warehouse	Historical data store that is denormalized for analytical reporting which contains one or more data marts. A warehouse is configured using database management systems such as Sybase IQ, Teradata, IBM, Oracle, MS Analytics, or Informatica	BI Tools: SAS, Cognos, Oracle, Hummingbird, SQL Reporting, ETL tools	
	Database Support	Database Support	Skills necessary to provide general database support including data modeling, development of stored procedures, performance tuning, backup & recovery, data migration, query/report creation, and security including activity monitoring	ERWin, Oracle designer, Visio, DB artisan, BMC Software, BMS utilities, File Manager, Move for DB2, Gen, TimeFinder, FlashCopy, DB2 Connect, Imperva, Data Vault	

IT CLASSIFICATION TECHNOLOGY LIST - ISSUE DATE: June 22, 2015

Technology Definition: A set of knowledge, skills and/or abilities, taking a significant time (e.g. 6 months) to learn, and applicable to the defined classification specification assigned.

Example of Tools: These are examples <u>only</u> for illustration purposes and are <u>not</u> meant to constitute a full and/or comprehensive list.

Classification	Discipline	Technology	Definition	Example of Tools	
SDS	**Software Development**	Integration Middleware	Middleware for cross platform and application integration. Includes integration for message sharing between applications.	Webmethods, Tibco, MQ Series, XML Gateway, Biztalk	
		Correspondence Generation	Use of server based software packages and custom code to facilitate the construction and maintenance of high quality bulk business correspondence, including mailing software	Adobe Livecycle, Pitney Bowes StreamWeaver	
		Electronic Data Interchage (EDI)	Structured transmission of data by electronic means. EDI allows businesses to exchange electronic documents using established formats and protocols. Examples include standard ANSI X. 12 data structures and transaction sets for health care and XML.	Foresight (HIPAA Validator Desktop and EDISIM), Gentran	
		COBOL	Necessary to develop applications and systems in COBOL and its variants. Including Case Tools. This is platform independent.	Pacbase, EAE, Telon	
		Case tools	Case tools provide integrated data and process design and modeling capabilities, code generation, and a run time environment	Pacbase, CA AllFusion Gen, Agile, Cold Fusion, Telon	
		.NET Framework	.NET is the framework for applications running on the Microsoft Windows platform. It provides services that can be extended to create specialized application to meet specific business needs. Can be implemented with multiple languages such as C#, VB, ASP, Cobol and LINQ.	MS Visual Studio, Lightswitch	
		Java 2 EE	Technology used to support object-oriented programming by way of Java language and includes a framework that promotes reusability and support for complex operations such as messaging and two-phase commits.	Rational Application Developer, Eclipse, J Builder, TIBCO Business Works	
		SQL	Structured Query Language is a non-procedural, declarative language specifically designed for accessing and managing relational databases. SQL/DML used in conjunction with many SDS programming languages.	QMF, SQL Server Management Studio, Oracle SQL Developer, TOAD, PL-SQL Developer, IBM Data Studio	

		Delphi	A Pascal derivative, strongly-typed, partially object-oriented programming language provides an Integrated Development Environment (IDE.) One of the few non-Microsoft languages that support the .NET framework.		
		Filenet	Business process, content and document management solution that allows content to be defined, modified and routed within specified business process		
		Oracle Development Suite	Oracle application development suite which includs Oracle Forms, J Developer, Designer, Reports, Discoverer, Business Intelligence Beans	Oracle Forms, J Developer, Designer, Reports, Discoverer, Business Intelligence Beans	
		Data Integration Tools	Data integration is the creation and support of automated processes through which data is extracted, transformed, and loaded from one data store to another	Informatica, Pentaho Data Integration	
		Report Generation	Suite of reporting tools that provides support for in-application reporting, business intelligence, ad-hoc report authoring and multi-dimensional information exploration.	Cognos, Crystal Reports, Pentaho	
		HTML/JavaScript/PHP/JQuery	Means to create structured docs for display in web browser	Dreamweaver, Notepad, Notepad2, Notepad++	
		PowerBuilder	Sybase Client Server application development suite		
		PeopleTools (PeopleSoft)	Software development environment consisting of PeopleTools Application Designer, Application Engine, Data Mover, PeopleCode and various other developer tools	PeopleTools Application Designer, Application Engine, Data Mover, PeopleCode	
		Statistical Analysis Tools (previously SAS/SPSS)	Statistical manipulation programming languages uniquely suited for performing statistical analysis, forecasting and operations research. The functions supported within SAS would be a non-trivial task to implement in another programming language	SAS, IBM SPSS, R	
		JCL/ECL	Job Control Language for use with Mainframe systems.		
		MS SharePoint	SharePoint is a collection of products and software elements that includes, web browser based collaboration functions, process management modules, search modules and a document-management platform		
		Content Manager	Business process, content and document management solution that allows content to be defined, modified and routed within specified business process	Filenet, Adobe LiveCycle Designer, Adobe Forms, SDS, DOC1	

		Software Testing/Quality Assurance tools	Software testing tool suites and Quality Assurance Tools used for functional testing, integration testing, test planning, and the management of testing artifacts	HP Testing Suite, Load Runner, HPQC, Microsoft Test Manager, NeoLoad, SOAP UI	
		Cognos Development Suite	Business intelligence and performance management suite of software, used to allow business users to make better informed decisions. Performance management allows for complex reporting, analysis, score carding, data integration, event management, dashboards and more.	Integrated Development Environment (IDE) of tools which consist of Framework Manager, Report Studio, Query Studio, Query Manager and Management Studio.	
		GIS	Server based Geographic Information System (GIS) software to provide web-oriented spatial data services. Includes Spatial Database Engine server software that spatially enables a relational database management system such as Oracle or SQL Server. Includes application development components (APIs and ADFs) to create geoprocessing services and render spatial content in web-based and client-server mapping applications.	ArcGIS Server, ArcSDE, ArcGIS Engine, ArcGIS API for MicroSoft Sliverlight, ArcGIS Server ADF, Address Broker	
		Salesforce	A global web-based software best known for its customer relationship management (CRM) module. Specialized software as a service (SaaS) to help users handle all of their business needs like managing marketing campaigns, analyzing performance, and tracking spending and sales.		

IT CLASSIFICATION TECHNOLOGY LIST - ISSUE DATE: June 22, 2015

Technology Definition: A set of knowledge, skills and/or abilities, taking a significant time (e.g. 6 months) to learn, and applicable to the defined classification specification assigned.

Example of Tools: These are examples <u>only</u> for illustration purposes and are <u>not</u> meant to constitute a full and/or comprehensive list.

Classification	Discipline	Technology	Definition	Example of Tools	
IFS	**Network Administration (Hardware & Software)**	Microsoft NW	File and Print and E-Mail/Calendaring Services supported by Microsoft Operating Systems. Including the definition, specification, and refinement of network requirements, topology, protocols, facilities, and implementation methods	HP Openview and Castle Rock Computing SNMPc monitoring systems	
		UNIX	File and Print and E-Mail/Calendaring Services supported by UNIX Operating Systems. Including the definition, specification, and refinement of network requirements, topology, protocols, facilities, and implementation methods		
		Novell NW	File and Print and E-Mail/Calendaring Services supported by Novell Operating Systems (NetWare, Suse Linux). Including the definition, specification, and refinement of network requirements, topology, protocols, facilities, and implementation methods		
	Enterprise Software Administration	Business Intelligence Software Administration	Technologies provide historical, current, and predictive views of business operations. Common functions of Business Intelligence technologies are reporting, online analytical processing, analytics, data mining, business performance management, benchmarking, text mining, and predictive analytics	Cognos, Informatica	
		Collaboration/Conferencing Software Administration	Supports enterprise-scale collaboration, content management, enterprise search, desktop tool integration, and portal capabilities	eRoom, MS Sharepoint, Groupwise	
		Project Management Software Administration	supports project tracking and management	Clarity, MS Project, MS Project Portfolio Server, Novell Teaming and Conferancing	
		Performance Monitoring Software Administration		TIVOLI, CompuWare	
		Help Desk Software Administrtion	supports work request management system	ITSM-7	
		Integration Middleware	Supports multiple processes running on one or more machines to interact and includes integration for message and data sharing between applications	Filenet, WebSphere, Oracle Application Server, Microsoft IIS, Imaging, Webmethods integration platform, TIBCO, MQ Series, Biztalk, IMS, CICS, VTAM, IDM	

		Enterprise Content Management Systems Administration	Used to capture, manage, store, preserve, and deliver content and documents related to organizational processes. ECM tools and strategies allow the management of an organization's unstructured information, wherever that information exists.	FileNet P8, FileNet Image Services, Domino, Altiris, Drupal, WordPress, Apache web server, Web Content Management Systems (Open Source and proprietary)
		Software Testing/ Quality Assurance Tools	Software testing tool suites and Quality Assurance Tools used for load testing, test planning, and the management of testing artifacts	HP Testing Suite, CompuWare Quality Assurance Tools, Empirix, Loadrunner
		Time Management Software Administration	Installation, patching, upgrading and troubleshooting of time management systems outside of OAKS	Kronos iSeries
		.Net Framework	.Net is the framework for applications running on the Microsoft Windows platform.	
		Fixed/Mobile Admin	Support of platforms for the provisioning of fixed/mobile telecommunications devices wired and wireless	Motorola
		Application Distribution	Automates the distribution of desktop applications and operating system upgrades, ensuring end user devices are always up to date	ZenWorks, LanDesk, SMS, WSUS, Software Deployment
		GIS	Server based Geographic Information System (GIS) software to provide web-oriented spatial data services. Includes Spatial Database Engine server software that spatially enables a relational database management system such as Oracle or SQL server	ArcGIS Server, ArcSDE, Address Broker
		Security Software and Hardware	Security software and hardware, including anti-virus, anti-spyware, anti-spam, network access control, encryption software and data loss prevention for desktops, servers, email systems and other network gateways.	Symantic, SOPHOS, Mcafee, SafeBoot
	Software Configuration Management	Software Configuration Management	Verification of correctness, assurance of quality and timely deployment of application software and associated components. Products in the Serena Dimensions, PVCS, and SCLM (IBM) suites are used	IBM SCLM, Serena PVCS, Dimensions, Microsoft Team Foundation Server
	Operating System Administration (Mainframe and Server)	Directory Services	Technology supports installation, configuration, maintenance and support for the Novell directory products and supports development and production systems. Including e-Directory, Microsoft Active Directory (Environment size: Single partition and hundreds of objects to multiple partitions and millions of objects)	iMonitor, DSREPAIR, LDAP Browser, Various Packet Scanners, IDM - Novell Idenity Manager, Microsoft Active Directory, Shell, Perl

		Server Virtualization (previously VMWare, IBM Power VM)	Virtualization products and services run multiple virtual machines on a single physical machine, sharing the resources of that single computer across multiple environments	Vmware ESX/ESXi, Microsoft Hyper-V, IBM Power VM	
		UNIX/Linux	Operating systems used to manage a variety of open systems based servers. Multiple vendors supply different versions of the original UNIX operating systems. ~~Includes AIX, Solaris, SUSE, HP.~~	Red Hat Linux, IBM AIX, Oracle Solaris, Micro Focus SUSE, HP-UX	
		IBM Mainframe	Mainframe enterprise operating system from IBM. z/OS contains hundreds of different components including JCL, z/OS commands, JES, DFP, HSM, SMS, RACF, SMPE, VTAM, TCP/IP, Languages (Assembler, COBOL, REXX, CLIST, C++, JAVA), as well as many other components. ISV (independent software vendors) software also runs on z/OS		
		UNISYS	~~Mainframe enterprise operating system which processes using proprietary O/S and hardware to provide business solutions~~		
		Microsoft ~~Windows~~ Server	Administration and operational support for MS Windows servers - configuration, patching, upgrades, provisioning, troubleshooting, etc	Microsoft Management Console ~~MS Outlook, HP Blade Servers, Vmware virtual servers~~	
		Novell Tools/Utilities	The use of products and services from Novell such as eDirectory developer suite, Novell Developer Kit and GroupWise Administrative API and Developer Suite		
	Hardware Support	Hardware Configuration Management	SMPE - SMP/E is the basic tool for installing and maintaining software in z/OS systems and subsystems		
		INTEL	Provisioning, management and administration of Intel based equipment and software	HP Systems Insight Manager (iLO)	
		Microsoft OS	Operating system running on PC workstations that can be used as a stand alone or networked computer. This includes imaging the computer and workstation policy management.		

		IBM Hardware	Knowledge of capabilities and components of hardware supplied in products produced by IBM. Requirements concerning understanding architecture and hardware capabilities are essential skills. Application of firmware is a major part of duties associated with needed competencies. Firmware is a term often used to denote the fixed, usually rather small, programs and data structures that internally control various electronic devices. Typical examples of devices containing firmware range from end-user products such as remote controls or calculators, through computer parts and devices like hard disks/Storage Area Networks and Central Processing Units.		
		UNISYS	Knowledge of capabilities and components of hardware supplied in products produced by UNISYS Corporation. Requirements concerning understanding architecture and hardware capabilities are essential skills. Application of firmware is a major part of duties associated with needed competencies. Firmware is a term often used to denote the fixed, usually rather small, programs and data structures that internally control various electronic devices. Typical examples of devices containing firmware range from end-user products such as remote controls or calculators, through computer parts and devices like hard disks/Storage Area Networks and Central Processing Units		
		Imaging	Support and administration of hardware for Dakota, Kofax, RightFax and FileNet related imaging technologies		
		Storage Management	Fiber channel/SAN technology, tape/backup/recovery technology, optical storage, SAN attached storage, network attached storage, storage virtualization, storage resource monitoring and management, archiving technologies, disk provisioning, performance tuning, and storage related aspects of disaster recovery. Includes FCP, iSCSI, NFS, CIFS and FCoE storage protocols in use by multiple vendors.		

		Printer Support	Support required for mainframe, network, desktop, multi-function and mobile printers. Major support is for IBM, Lexmark, HP, Dell and Xerox printers to include large print production cut sheet and continuous feed print devices by the above printer manufacturers as well as OCE' Scanning, LDAP Athentication		
		Router/Switch	core networking functions, including routing, switching, security, WAN optimization, QOS, VoIP and Internet services	Cisco	
		Desktop Support	Hands on administration, diagnosis and repair of various brands of desktops (CPU and monitors), laptops and related hardware peripherals and endpoint devices. Brands include HP, Dell, and IBM	Computrace, Safeboot and various imaging software	
		Fixed/Mobile Hardware	Satellite, portable and mobile digital Voice and data devices. (i.e. MARCS, Blackberry Servers, Handheld Devices, and PDAs) including repair, configuration, managing or provisioning of fixed/mobile of telecommunications devices wired and wireless	Motorola CPS, MA/COM programmer, endec pro, RUG 3	
		WAN	A wide area network (WAN) is a computer network that covers a broad area (i.e., any network whose communications links cross metropolitan, regional, or national boundaries). This is in contrast with personal area networks (PANs), local area networks (LANs), campus area networks (CANs), or metropolitan area networks (MANs) which are usually limited to a room, building, campus or specific metropolitan area (e.g., a city) respectively		
		QOS Multi-service networking	(AVVID) Architecture for voice, video and integrated data on ONE network. This new breed of network engineer has to integrally understand voice, video and data networks, to include the many features and functionality for each one to be able to design, implement & support a single converged QOS Multi-service Network.	Polycom MGC 100 Bridge, Polycom Application Servers (Path Navigator, Web Commander, Global Management Server, MGC Manager), Tandbert	
		Wireless	Design, Administration and Management of wireless technology used to provide cable free connectivity		

	Enterprise Security	Identity & Access Management	Identification of individuals in a system (such as a country, network or organization) and controlling access to the resources in that system by placing restrictions on the established identities	LDAP, eDirectory, IDM, access Manager, MS Windows Identity Foundation, Meta-Directories, Identity Federaion, RACF, Novell IDM / Access Manager, various directory sync drivers, Tivoli Identity Manager, Tivoli Access Manager	
		Security Monitoring	Monitors network and/or system activities for malicious or unwanted behavior and reacts to block or prevent those activities. Includes log management, SIEM, data loss/leak prevention and DMZ administration	Cisco ASA Firewall, Snort, OSSEC, Prelude, Tripwire, AIDE, Samhain, Osiris, Cisco NIDS, Tipping Point, Sorcefire, CorreLog, LogLogic, LogRythm, AlertLogic, Splunk, ArcSight, Syslog, Imperva SecureSphere, Microsoft RMS, RSA DLP, Foundation Enterprise (McAfee), NESSUS (Tenable Network Security), AppScan Enterprise and Developer Edition (IBM/Rational), Novell BorderManager / Audit, Various proxy monitoring applications	
		Computer/Digital Forensics	The goal of computer forensics is to explain the current state of a *digital artifact.* The term digital artifact can include a computer system, a storage medium (such as a hard disk or CD-ROM), an electronic document (e.g. an email message or JPEG image) or even a sequence of packets moving over a computer network. The explanation can be as straightforward as "what information is here?" and as detailed as "what is the sequence of events responsible for the present situation?"	BackTrack, DD, EnCase, FTK Imager, Sleuth Kit, SANS Investigative Forensic Toolkit (SIFT).	
		Security Software and Hardware	Security software and hardware, including anti-virus, anti-spyware, anti-spam, network access control, encryption software and data loss prevention for desktops, servers, email systems and other network gateways.	Symantic, SOPHOS, Mcafee, SafeBoot	
	Telephony Support	VOIP	Software based call-processing system includes phones, gateways, conference bridges, transcoding resources, and voicemail boxes	Cisco CUCM, Nortel	
		PBX	a telephone exchange that serves a particular business or office, as opposed to one that a common carrier or telephone company operates for many businesses or for the general public	Centrex, Fujitsu 9600, Mitel SX 200, NEC 2400, Avaya & Gateway	
		IVR/ACD	enterprise call center technnologies	Aspect/Rockwell Spectrum RCS, Aspect/Rockwell REN	

System Administration	System Scheduling	Creation of job schedules and calendars to controls every aspect of report processing and distribution, including report decollating, bundling, printing, online viewing, and archiving. Transforms the job schedule into a file transfer scheduling engine. Defines secured file transfers are created between multiple platforms, including mainframes and distributed systems.	BMC Control Products Suite, Software Configuration and Library Manager(SCLM), Dimensions, BMC Enterprise Manager, BMC Control-M, Dimensions, Advanced FTP, UC4, PeopleTools, CA JobTrac, UC4 AppWorx, Automic	
		Electronic Data Interchage (EDI)	This is the structured transmission of data by electronic means. It is used to transfer electronic documents from one computer system to another, i.e. from one business to another business. Examples of this would be: the standard ANSI X12 data structure and the standard transaction set for EDI transactions for health care(HIPAA). Knowledge of capabilities and components in scheduling software and configuration management suites are used to provide these important services.	Foresight (HIPAA Validator Desktop and EDISIM), BMC's (Control Products Suite and Enterprise Manager) and Serena's Dimensions	
		Systems Control and Monitoring	Console software used to control and monitor automated job schedules on mainframe and/or distributed type systems. Manages and automates the execution of jobs across mainframe and/or various open systems platforms as well as various hardware vendor platforms either in the data center or locations outside the data center. Performs job handling tasks of the operations staff. Controls every aspect of report processing and distribution, including report decollating, bundling, printing, online viewing, and archiving	BMC Control Products Suite, IBM zOS Systems Tools (Flasher, Omegamon, TSO / ISPF, JCL, & MVS), JOBSCAN, Tape Management System (TMS), BMC Enterprise Manager, BMC Control-M, Tivoli Alerts Monitor, Vantage Alerts Monitor, SFTP, SSH, HTTPS, File Encryption, AES256	