**Technical Reference Model  
Communications and Technology Management**

09/24/2015

| **Area** | **Category** | **Standard** |
| --- | --- | --- |
| **Application Technology** | | |
| Development Tools | Analysis, Design and Modeling | Unified Modeling Language (UML) |
| Requirements Management | Rational Software Architect (RSA) |
| Software Change and Configuration Management Tools | GIThub |
| Web Authoring Tools | Drupal (outward) |
| Application Development Tools | Visual Studio |
| PL/SQL Developer |
| Notepad++ |
| Java |
| Cold Fusion |
| Software Engines | Search Engines | Solr |
| Geographic Information System (GIS) Engines | ESRI Current minus 2 versions (10.1-10.3) |
| ArcGIS for Desktop current minus 2 versions (10.1-10.3) |
| ArcGIS for Server current minus 2 versions (10.1-10.3) |
| ArcGIS Online current minus 2 versions (10.1-10.3) |
| Smallworld Electronic Office (AE only) |
| ArcSDE current minus 2 versions (10.1-10.3) |
| FME current minus 2 versions (10.1-10.3) |
| Business Rules Engines | BPM |
| BPMN |
| Business Process Management Engines | Websplore |
| Application and Web Server Software | Application Server Software | ArcGIS Server (includes server extensions) current minus 2 versions (10.1-10.3) |
| FME Server current minus 2 versions (10.1-10.3) |
| Web Server Software | Apache current minus 2 versions |
| Internet Information Services (IIS) current minus 1 version |
| IBM WebSphere |
| Integration Software | Enterprise Service Bus (ESB) | IBM Integration Bus (IIB) |
| Application Testing Software | Debugging Test Tools | PL/SQL Developer |
| Fiddler |
| Firebug (Firefox plugin) |
| IE Developer Tools |
| Function Testing Tools | PL/SQL Developer |
| Load and Performance Testing Tools | PL/SQL Developer |
| Visual Studio |
| Jmeter |
| System Testing Tools | Visual Studio |
| PL/SQL Developer |
| Unit Testing Tools | Visual Studio |
| PL/SQL Developer |
| **Information Management Technologies** | | |
| Business Intelligence and Data Warehouse Platforms | Business Intelligence Platforms | MicroStrategy |
| Web Reporting Tools | Google Analytics |
| DBNetGrid |
| CADReports |
| Microcall |
| Dashboard/Scorecard Tools | MicroStrategy |
| Data Mining Tools | Oracle Discoverer |
| PL/SQL Developer |
| Data Warehouses | Oracle |
| SQL Server |
| Geospatial Tools | ArcGIS Desktop current minus 2 versions (10.1-10.3) |
| Data Analytics (Statistical Analytics, Prediction, and Modeling) | ERWin |
| Visio |
| Unstructured Data/Natural Language Processing | EDIMS |
| OS File |
| CIFS |
| Data Management | Database Connectivity | PL/SQL Developer |
| Oracle SQL Developer |
| Oracle SQL \*Net |
| Object Oriented DBMS | Oracle |
| Relational DBMS | Oracle |
| SQL Server |
| Oracle |
| SQL Server |
| Database Related Management Tools | IDERA |
| PL/SQL Developer |
| Data Integration | Database Replication and Clustering | PL/SQL Developer |
| FME |
| Oracle Real Applications Cluster (RAC) |
| SQL Server Cluster |
| Data at Rest | EMC |
| NetApp Storage |
| Tintri |
| Nimble |
| Pure |
| Data Synchronization | GeoWorx Sync |
| DFS |
| Extract, Transform, Load (ETL) | FME Server |
| FME Desktop |
| Informatica |
| Data in Motion (Common Message Terminology and Semantics) | SQL \*Net |
| TCP/IP |
| BigIP |
| **Collaboration and Electronic Workplace** | | |
| Collaboration Software | Content Management | Sharepoint |
| GIThub |
| Drupal CMS |
| Electronic Messaging | Microsoft Exchange |
| Unified Messaging | Lync/Skype |
| Email and Calendaring | Microsoft Outlook |
| Real Time and Team Collaboration | Sharepoint |
| GoToMyPC |
| Cisco VPN |
| NetMotion |
| Citrix |
| Adobe Connect |
| Vidyo |
| Cleo |
| Lync/Skype |
| Shared Whiteboard | SmartBoard |
| BMC Service Desk Express |
| Process and Schedule Synchronization | Tivoli |
| Airwatch |
| Computer Based Training (CBT) | Adobe Connect |
| Productivity Software | Accounting and Finance | Advantage |
| Desktop Publishing | Microsoft Publisher |
| File Manager and Viewer | EDIMS (Opentext) |
| Adobe Acrobat |
| Enterprise Faxing | Captaris Rightfax |
| Graphics Design Software | Adobe Creative Suite |
| Multimedia Software | Adobe Creative Suite |
| Standard Office Suite | Microsoft Office 2013 |
| Miscellaneous Productivity Tools and Utilities | Windows Snipping Tool |
| Web Browsers | Internet Explorer current minus 1 (IE 11 and 10) |
| Firefox current minus 1 |
| Chrome current minus 1 |
| Case Management | AMANDA |
| BMC Magic Service Desk Express |
| FDM |
| Versadex |
| LIMS |
| Surveys | Survey Monkey |
| Survey Builder |
| Sharepoint |
| **System Management** | | |
| System Management Tools | Alert Management | Orion Solarwinds |
| Puppet |
| Microsoft SCCM |
| Idera |
| Trend IWSVA |
| Netbotz |
| ISX Environmental Monitoring |
| Avaya ASA |
| Avaya Session Manager |
| ADV NMS |
| Application Management | Tivoli |
| Asset Management and Work Order | Maximo |
| BMC Magic Service Desk Express |
| Mobile Workforce Manager |
| Data Center Automation Software | Appsense |
| Idera |
| Microsoft SCCM |
| EMC Networker |
| APC Structureware |
| Active Directory |
| Disaster Recovery | NetApp VSC |
| Monitoring | Orion Solarwinds |
| Remote Desktop Management | Dameware |
| MS RDP |
| System Change and Configuration Management | Puppet |
| Microsoft SCCM |
| Network Infrastructure | Switching and Routing | Cisco |
| Brocade |
| ADVA |
| Load Balancing and Failover | F5 Big IP |
| Network Name and Address | Windows DHCP |
| Windows DNS |
| IP - IPv6 (not used yet) |
| Ipsec |
| WINS |
| BIND DNS |
| **Network and Telecommunications** | | |
| Transport | Local/Campus Area Network (LAN/CAN) | Cisco |
| Brocade |
| Wide Area Network (WAN) | City Owned Fiber |
| AT&T Connections |
| Avaya Equipment |
| Nortel Equipment |
| TimeWarner Cable |
| Cabling | BICSI |
| Wireless and Mobile Networks | Cellular Networks | AT&T (Public Safety) |
| Verizon (Public Safety) |
| AT&T (AVL- Public Safety) |
| Verizon (AVL) |
| Sprint (AVL) |
| Secure WiFi | Cisco WAP |
| Public WiFi | Cisco WAP |
| Meraki WAP |
| Radio | P25 |
| Motorola |
| Pagers | USA Mobility |
| Aircards | Sprint |
| Verizon |
| AT&T |
| End User Computer Devices | Personal Computers (PCs) | Dell Workstations/Laptops |
| Mobile Hardware | iPad current minus 1 |
| iPhone current minus 1 |
| Android current minus 1 |
| Hardened Laptops | Panasonic |
| Dell |
| **Platforms and Storage** | | |
| Operating Systems | Desktop/Laptop | Win 7 current minus 1 |
| Win 8 current minus 1 |
| Mainframe | AIX current minus 2 |
| Mobile Device | Android current minus 1 |
| iOS current minus 1 |
| Server | Windows Server current minus 1 |
| AIX current minus 2 |
| Linux (Redhat) current minus 1 |
| Cloud Services/Virtualization | Cloud Technologies | ArcGIS Online current minus 2 |
| Virtualization Software | VMWare |
| Citrix Xen Server |
| VirtualBox |
| Storage | Long Term Back-up | EMC Networker |
| NetApp |
| Avamar |
| Operational Recovery | EMC Networker |
| NetApp |
| Avamar |
| Production | EMC Networker |
| NetApp |
| Avamar |
| System Management Tools | Network Performance Optimization | Microsoft SCCM |
| Trend Antivirus |
| Puppet |
| GitHub |
| PKI |
| GPO |
| IBM HMC |
| Trend IWSVA |
| Logging | Splunk |
| Patch Management | WSUS |
| Microsoft SCCM |
| **Enterprise Architecture** | | |
| Employment | Application | Rational Software Architect (RSA) |
| MS Picture Manager |
| HTML-Kit |
| SnagIt |
| FTP |
| Subversion |
| Framework | Eclipse |
| Unified Modeling Language (UML) |
| IBM UPIA |