### Cabinet for Health and Family Services (CHFS)

**Office of Administrative and Technology Services (OATS) Standards**

**Category: 8000 Applications Development Domain**

**[8100](#a024001) - Application Development Methodology and Software**

[**8200**](#a024001) **- Application Development Platform**

[**8300**](#a024001) **- Application Development Quality Management Software**

Definition:

As per COT Standard #8100:*IT System Development / Integration Support includes the software services enabling elements of distributed business applications to interoperate and the software development necessary to facilitate such integration. These*

*elements can share function, content, and communications across heterogeneous computing environments.*

As per COT Standard #8200:

*Software that provides comprehensive facilities*

*to computer programmers for software*

*development.*

As per COT Standard #8300:

*Software tools that check web pages for accessibility and syntactical correctness of code.*

Rationale:

As per COT Standard #8100, 8200 and 8300:

*Need a limited product set for: economies of scale with respect to procurement, skills transferability required by a mobile workforce, data interchange between state government agencies, skills requirements for a competency team development environment.*

Approved Standard(s):

Approved Products: (For NEW Application Development, some exceptions for legacy applications)

CHFS has selected a subset of development tools that match CHFS technology development skills, along with additional tools required for Cabinet applications with exceptions granted by COT.

**Development Tools:**

|  |  |
| --- | --- |
| ADA Compliance: |  |
| Accessibility Insights for Web replacement for Compliance Sheriff/Compliance Deputy |
| JAWS |
| Barcode Generation: | TechnoRiversoft barcode / Zxing |
| Business Intelligence: | See CHFS Standard #2310 |
| Business Rules Modeling and Rules Engine Software: | Corticon Business Rules Engine – Business Rules Modeling and Execution |
| Corticon Business Rules Modeling Studio – Business Rules Creation & Modeling |
|   |   |
| Data Management: | VisionWare’s MultiVue for MDM – not for new development |
| IBM Initiate for MDM/InfoSphere MDM Standard Edition |
| Data Modeling and Design and data management: | Microsoft Visio  |
| Microsoft Visual Studio.NET |
| ERWIN Suite, Erwin DI |
| Database: See CHFS Standard #2400 | Microsoft SQL Server |
| Microsoft SQL Server Management Studio |
| Enterprise Collaboration and Document Repository: | SharePoint |
| Forms Generation: See CHFS Standard #2340: | InfoPath |
| OpenText Exstream Server – Dynamic Forms Generation |
| Microsoft Word – Open XML |
| Graphic Conversion and Creation: | Photoshop CS3 |
| Photoshop Elements |
| Scanning and Imaging Software: | KnowledgeLake CaptureKnowledge Lake Capture ServerKnowledge Lake Cloud |
|
|
| Integrated Development Environment (IDE): | Microsoft Visual Studio |
| Integration Brokers, Workflow and Rules Engines: See CHFS Standard #4350 | BizTalk/ Azure Logic Apps |
| Windows Workflow Foundation |
| K2 for workflow |
| Corticon for rules |
|  |
| Job Scheduling and Workflow: | Dollar Universe – Batch Scheduling |
| Dollar Universe  |
| Univiewer  |
| K2 Workflow |
| Programming Languages: | ASP.NET (C# or VB) |
| Microsoft .net core and .NET * + ASP.NET Core
	+ C#
	+ Razor Pages
	+ Web API core
 |
| CSSBootstrapjQueryIIS |
|  | Mainframe Z/OS (Legacy apps)* Cobol
 |
| Reporting: | Microsoft SQL Reporting Services |
| SAP Business Objects |
| Power BI |
| Tableau |
| ETL: | Microsoft SQL Integration Services |
| SAP BODS |
| Talend |
| Add-in Controls: | Silverlight – not to be used for new development |
| Silverlight SpellCheck Control (Karamasoft) |
| skmControl2 |
| skmValidators |
| KYApplication Security, Code Scanning, Vulnerability Scanning and Detection Tools: | AppScan Enterprise Edition (IBM) – Application Vulnerability Scanning |
| DataPower – SOA Security Appliance |
| Fortify Static Code Analyzer – Security Code Analysis Tool |
| IBM Integration Appliance - XI52 |
| Kentucky Online Gateway (KOG) |
| KYID |
| Metascan – AV/API |
| Qradar/ Exabeam – SIEM Tool |
| QRadar – Log Manager – SIEM Tool |
| Checkmarx Code Scan |
| AppScan  |
| Automated Testing Tool Software: See CHFS Standard #8000.022 | Microsoft Visual Studio Team Suite (VSTS) with Team Foundation Server (TFS) |
| SeleniumHQ Web Driver |
|  | Neoload for Performance testing |
| Code Management and Version Control: | Microsoft Team Foundation Server (TFS) - Azure Devops, TFS Git |
| Encryption Tools: | Bouncy Castle for encryption |
| Libraries and Frameworks: | Entity Framework |
| Microsoft Enterprise Library  |
| Microsoft .NET Framework |
| Newtonsoft.Json – Used to convert Class Object to JSON |
| MVC |
| WCF |
| Monitoring  | Idera |
| DynaTrace |
| BizTalk 360 |
| SCOM |
| PerfMon |
| Salesforce | Gov Cloud |
| Service Cloud |
| Customer Community |
| ViewTrac AppExchange product |
| Chatbots  |
| Einstein Analytics |
| Live Message – now replaced with Marketing Cloud  |
| Salesforce Developer Console |
| Salesforce DataLoader |
| Ant Scripts |
| Salesforce Optimizer Report |
| Salesforce HealthCheck |
| Salesforce Community Page Optimizer - Browser plugin |
| Marketing Cloud |
| WAVE Chrome Browser Plugin |
| Shield Platform |
|  Copado |
| OwnBackup stack |
| Rebrandly for URL Shortening |
| Shield Event monitoring |
| Simba Adapter for BODs/ SF connectivity |
| VS Code |
| Mulesoft |
| Data Analytics  | R, Python |
| Help tools | Robo Help, Walk me  |
| Other tools including open source | Style CopHearPlay appDrFirst PostmanCharts.jsRedCapBlazemeterReflectorDynamicPDF apache http Reverse ProxyAjax Control Toolkit (maintained by Dev Express)ionic zip libraryJQuery and JQuery UIEnterprise LibraryNunitPRISM (For Silverlight design)newtonsoft jsonBlueZone EmulatorNeodynamics Barcode ProfessionalPowerShellCodeSmith Generator – not recommended for new developmentIBM Infosphere Optim – for Data MaskingRedGate SQL DataCompareAspose Words for .NETBurp Suite Microfocus ForitifyWacomGranicusMoveItFiddlerSOAP UIGoogle AnalyticsGoogle APIs bundle, Google Maps, Google CaptchaLog ParserDebug DiagnosticOracle rightnow - CRMSeleniumHQ Web DriverNlogQIAcuity Software SuiteQualtrics  |
| Azure / Microsoft | Cognitive ServicesPower platformTeams ServicesLogic AppsIntegration Services |

Please follow KITS approval process for any cloud initiatives

**Comments:**

Please refer to QHI whitepaper for all cabinet shared services that all new applications should consider.

**Exceptions:**

Any exceptions to this standard must follow the procedures established in CHFS IT Policy #070.203.

**Review Cycle:**

Annually and as needed

**Timeline:**

Last reviewed: 01/02/2025

Next annual review: 08/01/2025

**Cross Reference**

COT Standard #8100 – Applications Development Methodology and Software

COT Standard #8200 – Applications Development Platform

COT Standard #8300 – Applications Development Quality Management Software

**Link to all COT Software Domain Standards:**

[KITS\_Report.pdf (ky.gov)](https://cgp.ky.gov/sites/COTPUBDOCS/Standards/KITS_Report.pdf)

**Link to all CHFS IT Standards:**

[CHFS IT Standards - Cabinet for Health and Family Services (ky.gov)](https://chfs.ky.gov/agencies/os/oats/Pages/itstandards.aspx)

**Link to all CHFS IT Policies:**

[CHFS IT Policies - Cabinet for Health and Family Services (ky.gov)](https://chfs.ky.gov/agencies/os/oats/Pages/ITpolicies.aspx)