

**City of Winston-Salem  
Standards 8/2006**

**Operating Environment**

The following is a summary of the city's standard system architecture.

Category	Function	Standard
Network	Communication Protocol	TCP/IP OSPF
	Ethernet	IEEE 802.3u IEEE 802.2
	Wireless	802.11
	Cabling	Multimode fiber, Singlemode fiber, Cat5, Cat5e, Cat6
	DNS/DHCP	Windows 2003 r2
Operation System	Enterprise Server, Virtualization	Windows 2003 Advanced Server, Sun Solaris, Linux, VMware ESX Server
	WorkGroup	Windows 2003 Server, Windows XP SP2
	Desktop	Windows XP SP2 (Minimum Pentium 4 3.8 MHz, 512 MB RAM, 40 GB FXDD) (To be replaced FY 09-10 – Intel Core Duo2, 1GB RAM, 80GB FXDD)
	Workstation	Windows XP SP2 (Minimum P4, 3.MGHz, 2GB RAM, 250 GB FXDD)
	Laptop	Windows XP SP2 (Minimum Pentium M, 2.0 MHz, 1GB RAM, 60 GB FXDD)
	Handheld Computer	Windows Mobile 5, Windows XP Tablet Edition
Printers	Small Networked Printer	Internal HP JetDirect with HP LaserJet 4200 series
	Large Capacity Networked Printer	HP LaserJet 4350/8100 Series
	Multi-Function Printer	HP LaserJet 4345/9140/9150/5035 Series
	Workgroup Color	HP Color LaserJet 4650C/5550C
	Standalone	HP DeskJet or LaserJet Series
	Plotter	HP DesignJet Series
Management	Network Mgmt	SNMP, Virtual Center, CosoleOne, NWadmin, Active Directory (AD), Insight
	Security	Cisco Secure Agent, Sun Solaris, LDAP, AD, SSL Certificates (HTTPS), ACL's, McAfee ePO desktop firewall, Cisco ASA firewall, VPN

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	DataBase and Application	Oracle/SQL Enterprise Manager, , Tidal software Sysadmiral, Other (3rd party embedded)
	Printer	Webjet Admin, AD, DSS
	File	AD
	Desktop	ZENworks Configuration Manager (Remote Management). FlexNet Admin Studio for Zenworks (Application Deployment), ZENworks Asset Management, Zenworks Patch Management, McAfee ePO (Enterprise Policy Orchestrator) Server
	Source Code	Visual SourceSafe
	Service & Support	FrontRange HEAT
	Virus and Spyware Protection	McAfee Enterprise suite
	Backup	Symantec Netbackup and Volume Manager, Storage TEK tape library (DLT/LTO)
	On-line Data	NetApp (SAN, NAS)
	Client Account	Novell Console One
Database (RDBMS)	Enterprise	Oracle, MS SQL
	Workgroup	Oracle, MS SQL
	Standalone	MS Access
Application	Language	Microsoft (VB6, .NET, C#), Sun (J2EE), Others (Delphi, Uniface, C++)
	Report	Crystal Reports, Actuate, SQL Reporting Server
Business Process Management	Workflow	Metastorm eWork
Electronic Document Management	Imaging, Scanning, COLD and Agenda Management	Information Informatics (eB), Kofax Ascent, SIRE Technologies
eCommerce	Server	IIS, Tomcat, Apache, JBoss
	Communication Protocols	HTTP, HTTPS, FTP, TELNET, SOAP, XML ,SIP
	Content Management	CityCMS (.NET)
	Content	HTML, CSS, CGI, JavaScript, JavaBeans
	Database Access	ActiveX, XML, ASP, ASP.NET, JavaVM, J2EE Java Servlets, ODBC
Geographic Information System	Spatial Data Management	ESRI (ArcGIS Server, ArcIMS, ArcSDE, ArcMap)

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Office Applications	Email	Novell GroupWise IMAP 4 (POP3 compliant), SMTP, IM
	Project Management	Microsoft Project 2003
	Word Processing, Spreadsheet, Database and Presentations	Microsoft Office Professional 2003 SP2
	Virus Protection	McAfee VirusScan 8.5
	Browser	Internet Explorer 7
	PDF Reader	Adobe Acrobat 7.0
Telecommunications	VoIP	Cisco Unified Communications (7900 Series Phone, Call Manager, UCCX, IP Communicator)
	VoiceMail	Cisco Unity, MS Exchange
	Remote Access	EVDO (Sprint, Verizon), Cisco VPN