

Addenda 5

OKDHS Information Technology Overview

**Office of Management and Enterprise Services
Information Services Division
Serving
Oklahoma Department of Human Services**



**Current Infrastructure
Technical Specifications Document
Version 2.0
July 30, 2013**

Office of Management and Enterprise Services - Information Services Division
Serving the Oklahoma Department of Human Services
Current Infrastructure Technical Specifications-Version 2.0
Enterprise Architecture and Engineering Services

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1. Summary

- 1.1. This document describes the current infrastructure technical specifications applicable to the Office of Management and Enterprise Services (OMES) Information Services Division and specific to the support of the Oklahoma Department of Human Services (OKDHS).
- 1.2. The content provides a fundamental knowledge base and understanding of the current information technology supporting the OKDHS business organization. The intended audience shall include, but not limited to, external IT suppliers as well as state or federal government agencies as mandated by statutes or on a need to know basis.

2. Scope

- 2.1. The technical specifications contained in this document should be utilized by a bidder or supplier as a basis for the minimum requirements that must be met or exceeded when proposing any new technology solution.
- 2.2. The current technical infrastructure has been architected using industry best practices and has demonstrated satisfactory operational performance criteria supporting a large production environment
- 2.3. All information contained in this document is current as of 07/31/2013, and is subject to change at any time based on business requirements, technological obsolescence, or as necessary to meet state and federal government mandates.

3. Technical Specifications - Hardware

3.1. Server (Wintel – x86)

- ACPI 1.0a Compliant
- PCI 2.2 Compliant
- PXE Support
- WOL Support
- Physical Address Extension (PAE) Support
- USB 2.0 Support
- Interface – EIDE (ATAPI)
- Processor- 2.4 GHz or greater
- Memory- 32GB or greater
- Cache Memory - 2MB Integrated Cache
- Spin Up Time - 10 seconds or less
- Optical Drive- 48X or greater
- Rack 4U
- Network Interface – 10/100/1000-T Ethernet
- Data Transfer Method – PCI Express x 4
- Network Transfer Rate – 10 Mb/s to 2000 Mb/s
- Network Connector – RJ 45
- Cable Support – 10/100/1000 Base-TX Category 5 UTP up to 100 meters

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3.2. Mainframe Computer

- IBM zEC12 2827-H20
- Central Memory - 160 GB
- MIPS - 1,661
- MSUs - 206
- Processors
 - zEC12 Processor - 1
 - zIIP Processors - 1 for DB2 and IMS
 - IFL Processors - 3 (z/Linux)
 - Integrated Coupling Facility (ICF) Processor - 1
- OKDHS LPAR Configuration

Agency	LPAR Name	CP's Initial/Reserved	Partition order	IFL	Z I P	Crypto Config CTL / USAGE	Mode	Initial Weight	Central Storage Initial / Reserved	Expanded Storage Initial/Reserved
OKDHS	SYSPRD1	2	3		1	1, 1	ESA/390	300	5.75 GB / 2 GB	0 / 0
	SYSPRD2	2	4		1	2, 2	ESA/390	700	14 GB / 4 GB	0 / 0
	SYSDEV1	2	5			3, 3	ESA/390	100	.5 GB / .5 GB	0 / 0
	SYSDEV2	2				4, 4	ESA/390	100	.5 GB / .5 GB	0 / 0
	CF1PRD	1 - ICF	1						1.5 GB	
	SYSDRVM	2	n			7, 7	ESA/390	100	14 GB / 0	1.5 GB / 0
	SYSVMD1		n	1		5, 5	Linux Only	100	1 GB / 0	0.5GB / 0
	SYSVMP1		n	2 Shared		No	Linux Only		28 G B	3 GB
	SYSVMP2		n	2 Shared		No	Linux Only		5.75 GB	1.5 GB

- zEC12 CHPID Configuration

Device	FICON CHPID	Shared	Type
DS8870	8x	Yes	FC
OPTICA (1:4) at OKDHS DC to connect back to 3745	1x	No	FC
3957 VTS Local	2x	No	FC
3957 VTS Remote	1x	No	FC
3592 ATL Local	2x	No	FC
3592 ATL Remote	1x	No	FC

3.3. DASD Storage (OKDHS)

DS8870 Disk Storage	OKDHS Capacity
DASD (total of all Usable Installed TBs)	27.5 TB
DASD (total Allocated TBs)	18.5
DASD (total available TBs)	9.0

3.4. Desktop Computer (Client)

- Processor – Intel Core 2 Duo 3 GHz, 1333 FSB
- Memory – 2.0 GB DDR2 Non-ECC SDRAM, 667 MHz (2DIMM)
- Keyboard – USB
- Mini-tower
- Small Form Factor
- Monitor – 19 inch Flat Panel, VGA/DVI
- Floppy Disk Drive – 1.44 MB 3.5 Inch Slimline Floppy Drive
- Video Card – 256 MB ATI Radeon 2400, Dual Monitor DVI or VGA W/Cables
- Hard Drive – 80 GB SATA 3 GB/Sec, with 8 MB Data Burst Cache
- Operating System – Genuine Windows XP Professional, SP2, with Media
- Mouse – USB 2 Button with Scroll
- CD-ROM/DVD-ROM Drive – 48X32 CDRW/DVD Combo
- Speakers - 2
- Serial Port Adaptor – PS2 Serial Port Adapter with dongle for second PS2 port

3.5. Mobile Computer (Laptop)

- Processor – Intel Core Duo T7100 1.8 GHz 800 MHz Dual Core
- Memory – 2 GB, DDR2-667 SDRAM, 2 DIMMS
- Touch Pad with UPEK Fingerprint Reader
- Hard Drive – 80 GB Hard Drive, 9.5MM, 5400 RPM
- Operating System – Microsoft Windows XP Professional SP2
- Modem – Internal 56 K
- Power Cords – Auto/Air/AC Adapter
- CD-ROM/DVD-ROM Drive – 24X CD-RW/DVD w/ Cyberlink PowerDVD, no media
- Bluetooth Module
- 802.11a/g Dual Band Mini Card

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3.6. Mobile Computer (Tablet)

- Processor - Intel Core 2 Duo U7600 1.2 GHz, 2 MB L2 cache, 533 MHz
- Memory - 2048 MB 667 MHz DDRII, SDRAM, 1 DIMM
- Hard Drive - 80 GB 4200 rpm PATA
- Display - 12.1 WXGA UWVA anti glare with digitizer (1280 X 800)
- Keyboard/Mouse - Keyboard with Enhanced Dual Pointing Devices
- Network Card/Modem - 10/100/1000 NIC; 56 K modem
- CD/DVD - Multibay 9.5mm DVD+/-RW
- Floppy - USB
- 802.11 a/b/g WLAN
- Bluetooth Module (integrated)
- Operating System - Microsoft Windows XP Tablet PC Edition

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3.7. Router (Standard)

- DRAM - Default: 256 MB; Maximum 1 GB
- Compact Flash – Default: 64 MB; Maximum: 256 MB
- Fixed USB Ports – 2
- Onboard LAN Ports – 2-10/100/1000
- Onboard AIM (Internal) Slot – 2
- Interface Card Slots – 4 slots, each slot supporting HWIC, WIC, VIC, or VWIC type
- Network Module Slots – 1 slot, supporting NM, NME and NME-X type modules
- Extension Voice Module Slot – 1
- PVDM (DSP) Slots on Motherboard – 2
- Integrated Hardware Based Encryption
- VPN Acceleration – DES, 3DES, AES 128, AES 192, and AES 256
- Integrated In-Line Power (PoE)
- Console Port – 115.2 Kbps
- Auxiliary Port – 115.2 Kbps
- Rack Mount 19 or 23 inches
- AC Input Voltage – 100 to 240 VAC, auto ranging
- AC Input Frequency – 47 to 63 Hz
- AC Input Current – 3A (110V) 2A (230V)
- AC Input Surge Current – 50A maximum, one cycle (-48V power)
- AC-IP Maximum In-Line Power – 160W to 360W

3.8. Router (Integrated Services)

- Network Module Slots – 4
- NMD/NME – 2
- HWIC Slots – 4
- Fixed LAN Ports – 2 Gigabit Ethernet (10/100/1000)
- AIM Slots – 2
- PVDM Slots -4
- USB Ports – 2
- Embedded VPN
- Memory – 256 MB DDR SDRAM
- Rack Mount 19-23 inches
- AC Input Voltage – 100-240 VAC, auto ranging
- AC Input Frequency – 4A (110V) 2A (230V)
- Output – 300W
- Redundant Power Supply

3.9. Catalyst Layer 2 Switch

- 16 Gbps switching fabric
- Forwarding rate based on 63-byte packets: 10.1 Mpps
- 10/100/1000BASE-T ports: RJ-45 connectors, 2-pair Category 5 UTP cabling
- Indicators – Per-port Status: Link Integrity, disabled, activity, speed, full-duplex
- Internal Power Supply – Power Rating: 0.035 kVA to 0.075kVA
- Maximum Power Consumption – 45W, 154 BTUs per hour
- AC Input Voltage – 100-240VAC auto ranging, 1.3-0.8A, 50-60 HZ
- IEEE 802.1D Spanning Tree Protocol
- IEEE 802.1p CoS Prioritization
- IEEE 802.1Q VLAN
- IEEE 802.1 (s) (w) (x)
- IEEE 802.2ah (100BASE-X single / multimode fiber only)
- IEEE 802.310BASE-T
- IEEE 802.3u 100BASE-TX
- IEEE 802.3ab 1000BASE-T
- IEEE 802.3z 1000BASE-X
- Advanced QoS

3.10. Catalyst Layer 3 Switch

- Chassis – 9 to 13 slot
- Backplane Bandwidth – 720-Gbps switch fabric
- Layer 3 Forwarding Performance – 400 mpps
- Redundant Supervisor Engines with stateful failover
- Redundant Power Supplies
- Power Supply – 4000/6000 W
- AC Input Voltage – 100 to 120 VAC, 200 to 240 VAC
- Rapid Spanning Tree Protocol
- Rapid convergence Layer 3 protocols
- Gateway Load Balancing Protocol
- Hot Standby Router Protocol
- Multimodule EtherChannel technology
- 10 Gigabit Ethernet
- 10/100/1000 Ethernet
- 10/100 Fast Ethernet
- FlexWAN (DS-0 to OC-3)
- Performance Maximum (MPPS) – Up to 400 MPPS
- IEEE 801.1 Bridging, VLAN tagging, Per-VLAN Group Spanning Tree, Rapid Spanning Tree Protocol, Identity Based Networking Servers
- IEEE 802.3 10BASE-T, 10BASE-FL, Link aggregation, 1000BASE-T, 10 Gigabit Ethernet, PoE, 100BASE-SX, 1000BASE-LX
- ATM 1483, 2584
- Border Gateway Protocol (BGP)
- General Routing Protocols
- MPLS
- Network Management
- Security 1492, 2138

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3.11. Firewall

- Performance – 2.0 Gbps
- 3DES – 1 Gbps
- Deep Inspection – 300 Mbps
- Concurrent Sessions – 512,000
- High Availability/Load Balancing- Active/Active; Active Passive; Load Balancing
- Protocols – HTTP, FTP, SMTP, POP 3, IMAP, DNS
- PKI Certificate requests (PKCS 7 and PKCS 10)
- Certificate Authorities Supported: Verisign, Entrust, Microsoft, RSA Keon, iPlanet, Baltimore, DOD PKI

3.12. Load Balancer

- Throughput: 6 Gbps L4/L7
- Hardware SSL: 5000 TPS
- FIPS SSL: FIPS 140/2-Level 2; 4000TPS (2K keys)
- Software Architecture: 64-bit TMOS
- Processor: Dual CPU, dual core (4 processing cores)
- Memory: 8 GB
- Hard Drive: Two 1TB drives (RAID 1)
- Gigabit Ethernet CU ports: 16
- Gigabit Fiber Ports (SFP): 8 LX; SX or copper

3.13. DNS

- Ethernet
- NTP, DNS, FTP, DHCP
- HTTP
- DNS throughput: 225 leases per second
- DHCP throughput: 36000 queries per second
- Connection/user quantity: 100000

3.14. Storage (Storage Area Network)

- Enterprise Virtual Array (EVA) 6400
 - Controller Model – HSV400
 - Version – 3028
 - LUN Size – 32TB
 - Virtual Controller Software – XCS v. 10.0xx
 - Controllers – 2
 - Host Ports – 8
 - Host Port Speed – 4Gb
 - Drives per Enclosure – 12
 - Drive Types – 600GB FC and 1TB FATA

- Enterprise Virtual Array (EVA) 8000
 - Controller Model – HSV110
 - Version – 6100
 - LUN Size – 32TB
 - Control Cache – 14GB

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- Virtual Controller Software – XCS v. 10.0xx
- Controllers – 2
- Host Ports – 8
- Host Port Speed – 4Gb
- Drives per Enclosure – 12
- Drive Types – 600GB FC

3.15. Storage (Network Attached Storage)

- Processor – 2.8 GHz Dual Core – 1MB L2 Cache
- Number of Configured Processors – 2
- Processor Capacity (Typical) – 4
- Memory – 64 GB
- Memory Protection – Advanced ECC, PC2-5300
- Network Controller – 2 embedded NC372i multifunction
- Gigabit Adapters – with TOE
- Storage Controller – Smart Array P400
- External Storage – MSA20, MSA30, MSA50, MSA60, MSA1500 G2, MSA1000, MSA1500, MSA1510i, EVA
- Drive for Mirrored Operating System
- Tivoli Storage Manager
- RAID 6

3.16. Storage (Virtual Tape System)

- Tape System Grid – IBM Total Storage 3953
 - Virtual Tape Engine (2) – IBM TS7740
- Virtual Tape Library - Emulation 256 3490 tape drives
- 3592 EOS Drives (10)
- FICON Links – 1GB, 2GB, and 4GB
- DASD Cache – 7 TB
- Grid Copper Connection – 1GB-Cat 6 cabling
- Operating System – z/OS, z/VM,

3.17. Extended Communications

- Ciena CN 2000 Storage Extension Platform
 - DS3 WAN Interface Module
 - FICON – 2GB
 - SONET/SDH Line
- IBM 3172 – Communications Controller
- IBM 3745 – Model 410 Communications Controller

3.18. Virtual Private Network (VPN)

- Secure Sockets Layer (SSL)
- Ethernet, Gigabit Ethernet
- HTTP, SNMP
- Secure Shell (SSH)
- 6000 FIPS Base Unit
- RAM – 2GB

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3.19. Printers

- Savin Multifunction – fax, copy, print, scanning
- Dedicated High Speed/High Availability
 - Advanced Printing Functions (APF) – enables Network to print capabilities throughout the OKDHS environment
 - Xerox 6160 - 180 ppm; 600 x 600 dpi; memory 2 GB; Hard Disk 36 GB
 - STK 5000 E21 Line Printer – 2,200 lpm
 - IBM 32/40 Micro Infoprint – 40 ppm

4. Technical Specifications – Applications

4.1. Applications Development Tools

- Cobol with JCL
- ASP.Net
- IIS 6
- IMS DC
- Power Builder
- IMSBATCH
- FOCUS, QMF
- VBScript
- JavaScript
- JAVA
- Visual Basic (VB6) Com+ Components

4.2. Software Applications

4.2.1. General Applications

System	Description	Type
ABAWD System Process	Able-Bodied Adult Without Dependents	Mainframe
ACES	Automated Caseload Evaluation System	Mainframe/Web
Adult Daycare	Adult Daycare	Mainframe
Aging Services	Aging Services	Mainframe
ALFX	Alpha Cross Reference	Mainframe
APS	Adult Protective Services	Web
ARU Reporting and Sampling Process	Accounts Receivable Update	Mainframe
Authorizations	Authorizations	Mainframe
Baby Voucher Process	Baby Voucher Process	Mainframe
BENDEX	Beneficiary and Earnings Data Exchange	Mainframe
Case numbering	Case numbering	Mainframe
CCM Web	Client Contact Manager	Web
Child Care Licensing - VB	Child Care Licensing - VB	Web
Child Care Reports	Child Care Reports	Mainframe

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System	Description	Type
Child Support Enforcement/OSIS	Oklahoma Support Information System	Mainframe
Client Numbering	Client Numbering	Mainframe/Client-Server
Commodities	Commodities	Mainframe/Client-Server
Content Management Server	Content Management Server	Web
Contracts	Contracts	Mainframe
CWA Reports	CWA Reports	Mainframe
Data Exchange	Data Exchange	Mainframe
Day Care Authorizations	Day Care Authorizations	Mainframe
Day Care Monthly batch process	Day Care Monthly batch process	Mainframe
DDSD Inquiries and Reports	Developmental Disabilities Services Division	Mainframe
DDSD SLA, NFM, POC	SLA - Supported Living Assistance; NFM - Non Fed Med; POC - Plan of Care	Mainframe
DDT System	Data Dictionary Tables	Mainframe
Developmental Disabilities Interfaces/CCM	Developmental Disabilities Interfaces/CCM	Mainframe/Client-Server
Direct Deposit Bank Information	Direct Deposit Bank Information	Mainframe
Diversion Assistance	Diversion Assistance	Mainframe
DOC/GEN	Document Generation	Mainframe/Client-Server
EBT Daycare	Electronic Benefits Transfer	Mainframe
EBT Food Stamps	Electronic Benefits Transfer	Mainframe
EBT Provider Web	Electronic Benefits Transfer	Mainframe
Ekids	Electronic KIDS (Web based component of KIDS)	Web
ELDERS - VB	Electronic Data Entry & Retrieval System	Web
E-MED	Electronic Medicaid	Web
Employee Self Services - Intranet	Employee Self Services - Intranet	Web
ET & E Authorizations	Education, Training and Employment	Mainframe
EX Processes	Exception Processes	Mainframe
FACS	Family Assistance Client Support	Mainframe/Client-Server
Federal Reporting	Federal Reporting	Mainframe
FF Case Entry	Free Form	Mainframe
FOCUS Labels	FOCUS Labels	Mainframe
Food Stamp Calculator	Food Stamp Calculator	Mainframe
TCM FILES	Targeted Case Management	Mainframe
HIFA	Health Insurance Flexibility Accountability	Mainframe/Web
High Performance Bonus	High Performance Bonus	Mainframe

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System	Description	Type
Report	Report	
HR Job Announcements - Internet	HR Job Announcements - Internet	Web
HRIS System - ORACLE Database	HRIS System - ORACLE Database	Web
IV-E AND PS2 Interface System	IV-E AND PS2 Interface System	Mainframe
JOIN	Joint Oklahoma Initiative Network	Web
KIDS/Child Welfare System	Case Information Data System	Mainframe/Client-Server
LIHEAP	Low Income Home Energy Assistance Program	Mainframe
Long-Term Care Authorization	Long-Term Care Authorization	Mainframe
Managed Health Care	Managed Health Care	Mainframe
Mass County Supervisor/Worker Update Process	Mass County Supervisor/Worker Update Process	Mainframe
MDRC	Manpower Development Research Corporation	Mainframe
MEDATS System - COBOL	Medical Eligibility Data And Tracking System	Mainframe
MEDATS System - FOCUS	MEDATS System - FOCUS	Mainframe
Medical Eligibility	Medical Eligibility	Mainframe
Medical Regular Roll	Medical Regular Roll	Mainframe
Medicare Buy-in Part A System	Medicare Buy-in Part A System	Mainframe
Medicare Buy-in Part B System	Medicare Buy-in Part B System	Mainframe
Miscellaneous Checking Writing (F)	Miscellaneous Checking Writing (F)	Mainframe
Notice Generation	Notice Generation	Mainframe
NTMC Eligibility	Non-Technical Medical Care	Mainframe
OCA	Office of Client Advocacy	Mainframe
OESC Data Match	Oklahoma Employee Security Council	Mainframe
OIG System	Office of Inspector General	Mainframe
OJA file exchange	Office of Juvenile Affairs	Mainframe
Overalls - COLA, SSI/SSA, TFP, Day Care, project	COLA - Cost Of Living Adjustment; SSI - Supplemental Security Income; SSA - Social Security Administration; TFP - Thrifty Food Plan	Mainframe
Overpayments - FOCUS	Overpayments - FOCUS	Mainframe
Overpayments Month End (F)	Overpayments Month End (F)	Mainframe
PB Authorizations	Plan of Care	Mainframe
Personal Care Authorizations	PB Authorizations	Mainframe
Print Forms - AFP	Personal Care Authorizations	Mainframe
PS2 Inquiry	Print Forms - AFP	Mainframe
Public School Nutrition	PS2 Inquiry	Mainframe

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System	Description	Type
Program		
Reconciliations (ARROW) (F)	Public School Nutrition Program	Mainframe
Regular Roll	Reconciliations (ARROW) (F)	Mainframe
Sales Tax Refunds	Regular Roll	Mainframe
Short-Term Authorizations	Sales Tax Refunds	Mainframe
Smart Start	Short-Term Authorizations	Mainframe
SSI/DCP	Smart Start	Mainframe
Static Web Pages	Static Web Pages	Web
Supplemental payments	Supplemental payments	Mainframe
TANF	Temporary Assistance to Needy Families	Mainframe
TANF Federal Reports - COBOL	Temporary Assistance to Needy Families	Mainframe
TANF Foster Child / Flex Fund File to Finance Daily	Temporary Assistance to Needy Families	Mainframe
TEFRA	Tax Equity and Fiscal Responsibility Act of 1982	Mainframe
Texas Data Exchange	Texas Data Exchange	Mainframe
Third Party Liability System	Third Party Liability System	Mainframe
Timeliness Reports - FOCUS	Timeliness Reports - FOCUS	Mainframe
Treasurer Office Transmission	Treasurer Office Transmission	Mainframe
Voluntary Day Care	Voluntary Day Care	Mainframe
Warrants - daily	Warrants - daily	Mainframe
Web PIN System	Web PIN System	Web

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- 4.2.2. Data Warehouse System
 - 10g environment
 - Oracle – Oracle Database 10g Enterprise Edition Release 10.2.0.1.0
 - Oracle SQL Plus Version 10.2.0.1.0
 - Oracle Enterprise Manager - Version 10.2.0.0.0
 - Brio/Hyperion – Hyperion Designer 8.5.0.243 Windows XP
 - Toad Version 9.0.1.8
 - Data Stage – Version 7.5.2
 - Web Focus – 7.6.2 Version 761, Gen: 040307; Packaging ID 80_040307
 - Windows 2003 Server
- 4.2.3. Imaging and Electronic Filing Systems
 - MasterScan Workflow Version 1.0; Business Imaging Systems
 - App Xtender Version 5.30.068 (Server); EMC Documentum/Legato
 - App Xtender Version 5.30.082 (Client); EMC Documentum/Legato
 - Web Xtender Version 5.30.035.0; EMC Documentum/Legato
 - License Server Version 6.60.049; EMC Documentum/Legato
 - Ascent Capture Version 7.5 SP4; Kofax
 - Remote Print Manager Version 4.5; Brooks Internet Software
 - PDFCreator Version 0.9.3; Open Source
- 4.2.4. Document Generation System
 - DocGen2 - Version 2.2.015; TCI
 - DocGen2 - Version 2.1.004; TCI
 - DocGen Security - Version 8.1.7; TCI
 - DocGen2 Web Service - Version 2.1.0; TCI
 - Adobe Central Output Server - Version 5.6; Adobe
 - Adobe Download Manager - Version 2.0; Adobe
 - Adobe Form Server Version - 5.1; Adobe
 - DCM Service Installation - Version 6.0.0; IKON
 - DCM Service Web Interface - Version 6.0.0; IKON
 - Lead Tools 14.5 .NET - Version 1.0.0; Unk
 - Cryptography - Version 1.0.0; Unk
 - Disk Image DISC-PDF56 - Version 1.0.0.0; IKON
 - FreeFlow Output Manager - Version 6.0; Xerox

5. Technical Specifications – Software Operating Systems

5.1. Mainframe z/OS

- z/OS 1.12

5.2. Mainframe z/VM

- z/VM 6.2
- SCO UNIX
- SUSE Linux Enterprise Server

5.3. HP UNIX

- HP UX 11.0; 11.11

5.4. Microsoft Windows

- Windows 2003 Enterprise Edition
- Windows Server 2003 Standard Edition
- Windows Server 2008 Enterprise Edition
- Windows Terminal Server 2008
- Windows Terminal Server 2008 Web Edition
- Windows XP Professional, SP3
- Windows XP Tablet Edition, SP2

6. Technical Specifications –Software

6.1. General Software

- Microsoft Office 2010
- Microsoft Exchange 2010
- Microsoft WSUS
- Altiris
- Microsoft Host Access Server
- Terminal Services
- HP Insight Manager
- Remedy
- Microsoft ISA 2006
- IIS 6.0
- Radius Server
- Adobe
- DB2 Connect Client
- HIS
- ODBC

6.2. z-Server Software

- ACF2/DB2 1.2 -SP01-CA
- ACF2/MVS 8.0-SP03-CA
- AFP Fonts 1.1
- AFP Workbench – IBM
- Application Performance Analyzer V1R1
- Breeze SCLM 1.1
- C/370 LIBRARY 2.2.0
- CL Supersession 147 - Candle
- Common Services 11.0 - CA
- Connect Direct (NDM) 4.3.00 - Sterling Commerce
- Data Dictionary - IBM
- Data Facilities SMS DSS - IBM
- Data Facilities SMS HSM - IBM
- Data Facilities SMS RMM - IBM
- Data Facilities Sort 14.0 - IBM
- DB2 Administration Tool 7.01

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- DB2 Manager 3.1.0
- DB2 Performance Monitor 8.01
- DB2 Server for OS/390 V8 Base
- DB2 Utilities Suite 8.01
- DBEdit 3.2
- Debug Tool V5 - IBM
- DEXAN/IMS
- DEXAN/MVS
- DocuText 5.9.2.A Diversified
- Enterprise COBOL for z/OS
- Enterprise PL/I for z/OS
- EXLM
- Fault Analyzer V5.1- IBM
- File Manager V5.1- IBM
- Finalist 7.73 - Group1
- FOCUS 7.2.7 - IBI.
- IBI iWay 7.1.0
- IBM Ported Tools for z/OS 1.1
- IBM QMF 6.1.0
- IBM Tape Tools Suite
- IMS 9.1
- IMS ACF2 Interface 6.5
- IMS Batch Terminal Simulator 3.1
- IMS Connect 1.1
- IMS DB Control Suite 3.1
- IMS DB Recovery Facility 2.1
- IMS ETO 3.1
- IMS File Manager - IBM
- IMS High Performance Load - 2.1
- IMS High Perf. Pt. Checker - 2.1
- IMS High Perf. Unload - 1.1
- IMS Image Copy Extensions - 3.2
- IMS INDEX Builder - 2.3
- IMS Library Integrity Utility 1.1
- IMS ORS 1.1
- IMS Parallel Reorg 3.1
- IMS Performance Analyzer 3.3
- IMS/ESA HW Data Compression 2.2
- Infoprint Server
- Infoprint - APF-to-Post Script Transform
- Integrated Catalog Forward Recovery
- MXG 23.09
- Netview File Transfer Program 2.2.1
- Network Control Program (NCP) 7.8
- OMEGAMON for IMS
- Open Connect File Transfer Product
- Overlay Generation Language 1.1
- Page Printer Formatting Aid 3.2
- Platinum Transcentury Calendar Routines

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- Platinum Transcentury Date Logic Generator
- Print Service Facility Base 3.4
- Print Service Facility Compatibility Fonts
- PRO/JCL 2.6.0.A - Diversified
- Quick-Ref R6.3 - ChicagoSoft
- Resource Management Facility
- SAS 9.1.2 - SAS Institute
- Sub-Capacity Reporting Tool 11.3 - IBM
- SYSPROG 1.0
- System Support Programs (SSP) 4.8.0
- Tivoli Job Scheduling Console 1.4
- Tivoli Management Framework 4.1.1
- Tivoli Netview 1.4 - IBM
- Tivoli OMEGAMON II for MVS V520
- Tivoli OMEGAMON XE V220
- Tivoli OMEGAVIEW II for Enterprise V300
- Tivoli Storage Manager z/OS API 5.3.3
- Tivoli Storage Manager Server 5.3.3
- Tivoli Workload Scheduler 8.2-
- Tivoli OMEGAVIEW V300
- ViewDirect for MVS 6.3

6.3. z/VM Software

- COBOL Compiler
- DB2 Connector
- EasySpooler
- FOCUS 6.8.5
- GLANPLUS B.09.01
- HP-UX 11.0 & 11.11
- OMNIBACK II Version 2.55
- Oracle Client 10G
- Samba - z/VM
- Tivoli Storage Manager B/A Client 5.3.3
- Web Focus - IBI
- DFSMF for z/VM
- DRMAINT
- Microfocus Server Express
- ORACLE (Child Welfare) 9IR2
- Velicity - ESALPS

7. Technical Specifications – Database General

- IMS Version 9 (on z-Server)
- DB2 Version 8.1 (on z-Server)
- Oracle Version 9.2.04 (on separate LPAR of the z-Server running SUSE Linux Enterprise Server Version 8)
- Oracle Version 9.2.0.8 (on HP N4000 running HPUX Version 11)
- Oracle 10.2.01 (on servers running Windows 2000, 2003)
- Microsoft Access

8. Technical Specifications – Database Sizes in Production

- IMS – 1.3 TB
- DB2 – 300 GB
- Oracle on Linux (Child Welfare) – 300 GB
- Oracle on Windows (Data Warehouse) – 500 GB
- SQL Server (s) – 171 GB (all but 12 GB non-Enterprise Data)

9. Technical Specifications – Security

- Microsoft Active Directory Security
- UNIX Security on UNIX Systems
- LDAP on Linux Systems
- CA/ACF2 on the z/OS System
- Federal Information Processing Standards (FIPS) Publication – FIPS-200, minimum security standards
- Advanced Encryption Standard (AES) – As described in the Federal Information Processing Standards (FIPS) Publication – FIPS 197 – Advanced Encryption Standard
- Triple Data Encryption Standard (DES)- As described in the NIST 800-67, Special Publication – Recommendation for the Triple Data Encryption Algorithm (TDEA) Block Cipher
- Skipjack (Codebook Encryptor/Decryptor) – As described in the FIPS 185, Escrowed Encryption Standard (EES) Publication

10. References

- 10.1. Cisco Systems
- 10.2. F5
- 10.3. Dell Corporation
- 10.4. Hewlett-Packard
- 10.5. IBM Systems
- 10.6. IEEE
- 10.7. Microsoft Corporation
- 10.8. OASIS
- 10.9. Symantec Corporation
- 10.10. Infoblox
- 10.11. National Institute of Standards and Technology (NIST)
 - 10.11.1. NIST Special Publications (800 Series)