

## **J.1. APPENDIX D - INFRASTRUCTURE TECHNICAL SPECIFICATIONS**

### **J.1.1. Summary**

- J.1.1.1. This document describes the current infrastructure technical specifications applicable to the OKDHS Information Technology environment. It is intended to provide Contractor a fundamental knowledge base and understanding of the current information technology supporting the OKDHS business organization.

### **J.1.2. Scope**

- J.1.2.1. The technical specifications contained in this document shall be utilized by Contractor as a basis for the minimum requirements that must be met or exceeded when proposing any new technology solution.
- J.1.2.2. The current technical infrastructure has been architected using industry best practices and has demonstrated satisfactory operational performance criteria supporting a large production environment.
- J.1.2.3. All information contained in this document is current as and is subject to change based on the needs of OKDHS.

### **J.1.3. Hardware**

#### **J.1.3.1. Server (Wintel – x86)**

- J.1.3.1.1. USB 2.0 Support
- J.1.3.1.2. Interface – EIDE (ATAPI)
- J.1.3.1.3. Processor- 2.66 GHz or greater
- J.1.3.1.4. Memory- 4GB or greater
- J.1.3.1.5. Cache Memory - 2MB Integrated Cache
- J.1.3.1.6. Optical Drive- 48X or greater
- J.1.3.1.7. Network Interface – 10/100/1000-T Ethernet
- J.1.3.1.8. Data Transfer Method – PCI Express x 4
- J.1.3.1.9. Network Transfer Rate – 10 Mb/s to 2000 Mb/s
- J.1.3.1.10. Network Connector – RJ 45

#### **J.1.3.2. Server (UX)**

- J.1.3.2.1. HP N-4000
- J.1.3.2.2. PA-RISC Processors: 360 MHz /PA8500, 440 MHz /PA8500, 550 MHz /PA8600
- J.1.3.2.3. SMP Configurations: Supports up to 8 CPUs
- J.1.3.2.4. Memory: 512MB to 32GB Max
- J.1.3.2.5. HP-UX Versions: 11 (64-bit) Supported
- J.1.3.2.6. On-Chip Cache: 1MB / 512KB
- J.1.3.2.7. Disk Drives: 2 Internal Hot-Plug Drives
- J.1.3.2.8. Storage Capacity: 71TB Max
- J.1.3.2.9. I/O Slots: 12
- J.1.3.2.10. I/O Features: Ultra2 SCSI, 10/100 Base-T LAN, 3x RS 232 ports for Console and UPS connections, Integrated Web Console
- J.1.3.3. Z-Server (Mainframe Computer)
  - J.1.3.3.1. IBM z10 (409) with zIIP engine (2097-E26)
  - J.1.3.3.2. IFB-MP Daughter Card (6)
  - J.1.3.3.3. STI-A8 Mother Card (3)
  - J.1.3.3.4. 4 GB Memory DIMM(8/feature) (4)
  - J.1.3.3.5. 48 GB Memory16-Port ESCON (6)
  - J.1.3.3.6. ESCON Channel Port (20)
  - J.1.3.3.7. Memory DIMM Airflow (64)
  - J.1.3.3.8. FICON Express4 4KM LX 4 ports (8)
  - J.1.3.3.9. OSA-Express2 GbE SX 2 ports (4)
  - J.1.3.3.10. OSA-Express2 1000BASE-T EN 2 ports (2)
  - J.1.3.3.11. CPACF Enablemen
  - J.1.3.3.12. 2 Book, 1 I/O
  - J.1.3.3.13. 6-Way Processor CP4
  - J.1.3.3.14. CP4 (6)
  - J.1.3.3.15. IFL (3)
  - J.1.3.3.16. ICF
  - J.1.3.3.17. 409 Capacity Marker
  - J.1.3.3.18. zIIP
- J.1.3.4. Server (other)
  - J.1.3.4.1. IBM System x3850 M2
  - J.1.3.4.2. Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w)
  - J.1.3.4.3. Additional Quad Core Intel Xeon Processor X7350 (2.93GHz 8MB L2 130w)
  - J.1.3.4.4. IBM 4GB Flash Drive
  - J.1.3.4.5. Internal SAS RAID
  - J.1.3.4.6. ServeRAID-MR10k SAS/SATA Controller
  - J.1.3.4.7. PRO/1000 PT Dual Port Server adapter by Intel (2)
  - J.1.3.4.8. QLogic 4Gb FC Dual-Port PCIe HBA for IBM System x (2)
  - J.1.3.4.9. Memory Expansion Card (4)
  - J.1.3.4.10. 4GB PC2-5300 CL5 ECC DDR2 SDRAM RDIMM (32)
  - J.1.3.4.11. 73GB 10K 2.5" Hot-Swap SAS HDD (2)

- J.1.3.5. Server (other)
  - J.1.3.5.1. IBM p570 (9117-MMA)
  - J.1.3.5.2. 16GB (4x4), 533MHZ, DDR2, POW6
  - J.1.3.5.3. 4.7GHZ POW6-2/0CORE 12 DDR2
  - J.1.3.5.4. IBM i5 OS
- J.1.3.6. Desktop Computer (Client)
  - J.1.3.6.1. Processor – Intel Core 2 Duo 3 GHz, 1333 FSB
  - J.1.3.6.2. Memory – 2.0 GB DDR2 Non-ECC SDRAM, 667 MHz (2DIMM)
  - J.1.3.6.3. Keyboard – USB
  - J.1.3.6.4. Mini-tower
  - J.1.3.6.5. Small Form Factor
  - J.1.3.6.6. Monitor – 19 inch Flat Panel, VGA/DVI
  - J.1.3.6.7. Floppy Disk Drive – 1.44 MB 3.5 inch Slimline Floppy Drive
  - J.1.3.6.8. Video Card – 256 MB ATI Radeon 2400, Dual Monitor DVI or VGA W/Cables
  - J.1.3.6.9. Hard Drive – 80 GB SATA 3 GB/Sec, with 8 MB Data Burst Cache
  - J.1.3.6.10. Operating System – Genuine Windows XP Professional, SP2, with Media
  - J.1.3.6.11. Mouse – USB 2 Button with Scroll
  - J.1.3.6.12. CD-ROM/DVD-ROM Drive – 48X32 CDRW/DVD Combo
  - J.1.3.6.13. Speakers – 2
  - J.1.3.6.14. Serial Port Adaptor – PS2 Serial Port Adapter with dongle for second PS2 port
- J.1.3.7. Laptop
  - J.1.3.7.1. Processor – Intel Core Duo T7100 1.8 GHz 800 MHz Dual Core
  - J.1.3.7.2. Memory – 2 GB, DDR2-667 SDRAM, 2 DIMMS
  - J.1.3.7.3. Touch Pad with UPEK Fingerprint Reader
  - J.1.3.7.4. Hard Drive – 80 GB Hard Drive, 9.5MM, 5400 RPM
  - J.1.3.7.5. Operating System – Microsoft Windows XP Professional SP2
  - J.1.3.7.6. Modem – Internal 56 K
  - J.1.3.7.7. Power Cords – Auto/Air/AC Adapter
  - J.1.3.7.8. CD-ROM/DVD-ROM Drive – 24X CD-RW/DVD w/ Cyberlink PowerDVD, no media
  - J.1.3.7.9. Bluetooth Module
  - J.1.3.7.10. 802.11a/g Dual Band Mini Card
- J.1.3.8. Tablet
  - J.1.3.8.1. Processor – Intel Core 2 Duo U7600 1.2 GHz, 2 MB L2 cache, 533 MHz
  - J.1.3.8.2. Memory – 2048 MB 667 MHz DDRII, SDRAM, 1 DIMM
  - J.1.3.8.3. Hard Drive – 80 GB 4200 rpm PATA
  - J.1.3.8.4. Display – 12.1 WXGA UWVA anti glare with digitizer (1280 X 800)
  - J.1.3.8.5. Keyboard/Mouse – Keyboard with Enhanced Dual Pointing Devices
  - J.1.3.8.6. Network Card/Modem – 10/100/1000 NIC; 56 K modem
  - J.1.3.8.7. CD/DVD – Multibay 9.5mm DVD+/-RW

- J.1.3.8.8. Floppy – USB
- J.1.3.8.9. 802.11 a/b/g WLAN
- J.1.3.8.10. Bluetooth Module (integrated)
- J.1.3.8.11. Operating System – Microsoft Windows XP Tablet PC Edition

**J.1.4. Router (Standard)**

- J.1.4.1. DRAM - Default: 256 MB; Maximum 1 GB
- J.1.4.2. Compact Flash – Default: 64 MB; Maximum: 256 MB
- J.1.4.3. Fixed USB Ports – 2
- J.1.4.4. Onboard LAN Ports – 2-10/100/1000
- J.1.4.5. Onboard AIM (Internal) Slot – 2
- J.1.4.6. Interface Card Slots – 4 slots, each supports HWIC, WIC, VIC, or VWIC type
- J.1.4.7. Network Module Slots – 1 slot, supports NM, NME and NME-X type modules
- J.1.4.8. Extension Voice Module Slot – 1
- J.1.4.9. PVDM (DSP) Slots on Motherboard – 2
- J.1.4.10. Integrated Hardware Based Encryption
- J.1.4.11. VPN Acceleration – DES, 3DES, AES 128, AES 192, and AES 256
- J.1.4.12. Integrated In-Line Power (PoE)
- J.1.4.13. Console Port – 115.2 Kbps
- J.1.4.14. Auxiliary Port – 115.2 Kbps
- J.1.4.15. Router (Integrated Services)
- J.1.4.16. Network Module Slots – 4
- J.1.4.17. NMD/NME – 2
- J.1.4.18. HWIC Slots – 4
- J.1.4.19. Fixed LAN Ports – 2 Gigabit Ethernet (10/100/1000)
- J.1.4.20. AIM Slots – 2
- J.1.4.21. PVDM Slots -4
- J.1.4.22. USB Ports – 2
- J.1.4.23. Embedded VPN
- J.1.4.24. Memory – 256 MB DDR SDRAM
- J.1.4.25. Redundant Power Supply

**J.1.5. Catalyst Layer 2 Switch**

- J.1.5.1. 16 Gbps switching fabric
- J.1.5.2. Forwarding rate based on 63-byte packets: 10.1 Mpps
- J.1.5.3. 10/100/1000BASE-T ports: RJ-45 connectors, 2-pair Category 5 UTP cabling

**J.1.6. Catalyst Layer 3 Switch**

- J.1.6.1. Chassis – 9 to 13 slot
- J.1.6.2. Backplane Bandwidth – 720-Gbps switch fabric
- J.1.6.3. Layer 3 Forwarding Performance – 400 Mpps
- J.1.6.4. Redundant Supervisor Engines with stateful failover
- J.1.6.5. Multimodule EtherChannel technology

- J.1.6.6. 10 Gigabit Ethernet
- J.1.6.7. 10/100/1000 Ethernet
- J.1.6.8. 10/100 Fast Ethernet
- J.1.6.9. FlexWAN (DS-0 to OC-3)
- J.1.6.10. Performance Maximum (MPPS) – Up to 400 MPPS
- J.1.6.11. IEEE 801.1 Bridging, VLAN tagging, Per-VLAN Group Spanning Tree, Rapid Spanning Tree Protocol, Identity Based Networking Servers
- J.1.6.12. IEEE 802.3 10BASE-T, 10BASE-FL, Link aggregation, 1000BASE-T, 10 Gigabit Ethernet, PoE, 100BASE-SX, 1000BASE-LX

**J.1.7. General Network and Security Protocols**

- J.1.7.1. IEEE 802.1D Spanning Tree Protocol
- J.1.7.2. IEEE 802.1p CoS Prioritization
- J.1.7.3. IEEE 802.1Q VLAN
- J.1.7.4. IEEE 802.1 (s) (w) (x)
- J.1.7.5. IEEE 802.2ah (100BASE-X single /multimode fiber only)
- J.1.7.6. IEEE 802.310BASE-T
- J.1.7.7. IEEE 802.3u 100BASE-TX
- J.1.7.8. IEEE 802.3ab 1000BASE-T
- J.1.7.9. IEEE 802.3z 1000BASE-X
- J.1.7.10. Border Gateway Protocol (BGP)
- J.1.7.11. Rapid Convergence Layer 3 Protocol
- J.1.7.12. Hot Standby Router Protocol
- J.1.7.13. Transport Layer Security (TLS)
- J.1.7.14. IP Security (IPSec)
- J.1.7.15. Secure Sockets Layer (SSL)
- J.1.7.16. Digital Encryption Standard (3DES)
- J.1.7.17. WS-Security
- J.1.7.18. TCP/IP
- J.1.7.19. Encapsulating Security Payload (ESP)
- J.1.7.20. Key Management Internet Key Exchange (IKE; RFCs 2407-2409)
- J.1.7.21. Public Key Encryption
- J.1.7.22. Secure / Multipurpose Internet Mail Extensions (S/MIME)
- J.1.7.23. Wired Equivalent Privacy (WEP)
- J.1.7.24. Pretty Good Privacy (PGP) Encryption
- J.1.7.25. Hypertext Transfer Protocol (HTTP)
- J.1.7.26. Hypertext Transfer Protocol with Secure Sockets Layer (HTTPS)

**J.1.8. Load Balancer**

- J.1.8.1. F5 Networks BIG-IP Local Traffic Manager (LTM) 6400

- J.1.8.2. Dual CPU
- J.1.8.3. Memory 4Gb
- J.1.8.4. ASIC: Packet Velocity
- J.1.8.5. ASIC 2
- J.1.8.6. Gigabit CU Ports: 16
- J.1.8.7. Gigabit Fiber Ports
- J.1.8.8. (SFP - GBIC Mini):
- J.1.8.9. Traffic Throughput: 2 Gbps
- J.1.8.10. Hardware Compression\* (2 Gbps)
- J.1.8.11. Storage Area Network (Fibre Channel)
  - J.1.8.11.1. HP Enterprise Virtual Array (EVA) 8000
  - J.1.8.11.2. Tier One Prod Data Storage – 43,086.00GB of 50,829.00GB allocated
  - J.1.8.11.3. Tier One Prod Data (2) Storage - 781GB of 6,132GB allocated
  - J.1.8.11.4. Prod Logs Storage – 1,025.00GB of 1,675.00GB allocated
- J.1.8.12. Storage Area Network (Fibre Channel)
  - J.1.8.12.1. HP Enterprise Virtual Array (EVA) 6400 (Local)
  - J.1.8.12.2. Tier One Prod Data Storage – 2,844.00GB of 11,171.00GB allocated
  - J.1.8.12.3. Tier Two FATA – 48,904.00GB of 11,171.00GB allocated
- J.1.8.13. Storage Area Network (Fibre Channel)
  - J.1.8.13.1. HP Enterprise Virtual Array (EVA) 6400 Remote
  - J.1.8.13.2. Tier One Prod Data Storage – 2,544.00GB of 11,171.00GB allocated
  - J.1.8.13.3. Tier Two FATA – 54,786.00GB of 56,170.00GB allocated
- J.1.8.14. Storage (Network Attached Storage)

- J.1.8.14.1. Processor – 2.8 GHz Dual Core – 1MB L2 Cache
- J.1.8.14.2. Number of Configured Processors – 2
- J.1.8.14.3. Processor Capacity (Typical) – 4
- J.1.8.14.4. Memory – 64 GB
- J.1.8.14.5. Memory Protection – Advanced ECC, PC2-5300
- J.1.8.14.6. Network Controller – 2 embedded NC372i multifunction
- J.1.8.14.7. Gigabit Adapters – with TOE
- J.1.8.14.8. Storage Controller – Smart Array P400
- J.1.8.14.9. External Storage – MSA20, MSA30, MSA50, MSA60, MSA1500 G2, MSA1000, MSA1500, MSA1510i, EVA
- J.1.8.14.10. Drive for Mirrored Operating System
- J.1.8.14.11. Tivoli Storage Manager
- J.1.8.14.12. RAID 6
- J.1.8.15. Storage Director
  - J.1.8.15.1. Storage Director – IBM 2027-C40 FICON (2)
  - J.1.8.15.2. 32 ports per unit
  - J.1.8.15.3. FICON Links – 1GB, 2GB, and 4GB
  - J.1.8.15.4. Direct Access Storage Devices (DASD)
  - J.1.8.15.5. Enterprise Storage Server – IBM 2105-800 – 13.2 TB
  - J.1.8.15.6. System Storage – IBM 2421-92E DS8300 – 18 TB
- J.1.8.16. Storage (Virtual Tape System)
  - J.1.8.16.1. Tape System Grid – IBM Total Storage 3953
  - J.1.8.16.2. Virtual Tape Engine (2) – IBM TS7740
  - J.1.8.16.3. Virtual Tape Library - Emulation 256 3490 tape drives
  - J.1.8.16.4. 3592 EOS Drives (10)
  - J.1.8.16.5. FICON Links – 1GB, 2GB, and 4GB
  - J.1.8.16.6. DASD Cache – 7 TB
  - J.1.8.16.7. Grid Copper Connection – 1GB-Cat 6 cabling
- J.1.8.17. Firewall
  - J.1.8.17.1. Juniper ISG Firewall Appliance
- J.1.8.18. Domain Name Server
  - J.1.8.18.1. Infoblox 550
- J.1.9. Communications Controller**
  - J.1.9.1. IBM 3172 – Communications Controller
  - J.1.9.2. IBM 3745 – Model 410 Communications Controller
- J.1.10. Storage Extension Platforms**
  - J.1.10.1. Ciena CN2000 Storage Extension Platform
  - J.1.10.2. Dark fiber – LAN Extension
- J.1.11. Printers**
  - J.1.11.1. Savin Multifunction 9080 – fax, copy, print, scanning (network)

- J.1.11.2. Xerox 6160 - 180 ppm; 600 x 600 dpi; memory 2 GB; Hard Disk 36 GB
- J.1.11.3. STK 5000 E21 Line Printer – 2,200 lpm (dedicated)
- J.1.11.4. IBM 32/40 Micro Infoprint – 40 ppm (dedicated)
- J.1.11.5. HP/Canon/Lexmark (USB)

**J.1.12. Applications Development Tools**

- J.1.12.1. COBOL with JCL
- J.1.12.2. ASP.Net
- J.1.12.3. ASP Classic
- J.1.12.4. IIS 6
- J.1.12.5. IIS 7
- J.1.12.6. IMS DC
- J.1.12.7. Power Builder
- J.1.12.8. IMSBATCH
- J.1.12.9. FOCUS
- J.1.12.10. WebFOCUS
- J.1.12.11. QMF
- J.1.12.12. VBScript
- J.1.12.13. JavaScript
- J.1.12.14. JAVA
- J.1.12.15. Visual Basic (VB6) Com+ Components
- J.1.12.16. Microsoft Office 2007 Visual Web Developer
- J.1.12.17. Microsoft Visual C++ 2008 Redistributable – x86
- J.1.12.18. Microsoft .NET Framework 2.0
- J.1.12.19. Microsoft .NET Framework 3.5
- J.1.12.20. Host Integration Services
- J.1.12.21. Visual Studio 2003, 2005, 2008
- J.1.12.22. Microsoft Content Management Server
- J.1.12.23. Premirus Data Access Component
- J.1.12.24. Sharepoint
- J.1.12.25. Team Foundation Server
- J.1.12.26. Visual Source Safe
  
- J.1.12.27. Windows Power Shell
- J.1.12.28. TOAD
- J.1.12.29. Remedy AR 7.n (ITSM)
- J.1.12.30. UltraEdit, UltraCompare, UltraSentry

**J.1.13. Software Applications**

| System               | Description                          | Type      |
|----------------------|--------------------------------------|-----------|
| ABAWD System Process | Able-Bodied Adult Without Dependents | Mainframe |



| System                                    | Description  | Type                    |
|---|--|-------------------------|
| ACES                                      | Automated Caseload Evaluation System                                     | Mainframe/Web           |
| Adult Day Care                            | Adult Day Care   | 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                      | Child Care Licensing - VB  | Web                     |
| Child Care Reports                        | Child Care Reports   | Mainframe               |
| Child Support Services                    | Oklahoma Support Information System                                      | Mainframe               |
| Client Numbering                          | Client Numbering   | Mainframe/Client-Server |
| Commodities                               | Commodities  | Mainframe/Client-Server |
| 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 Day Care                              | 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                                    | Electronic Data Entry and 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               |
| Food Stamp Calculator                     | Food Stamp Calculator  | Mainframe               |
| TCM FILES                                 | Targeted Case Management   | Mainframe               |

| System                                       | Description  | Type                            |
|--|--|---------------------------------|
| HIFA   | Health Insurance Flexibility Accountability                  | Mainframe/Web                   |
| High Performance Bonus Report                | High Performance Bonus Report                                | Mainframe                       |
| 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 (Linux)/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 (MEDATS System) | 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                       |
| NTMC Eligibility                             | Non-Technical Medical Care                                   | Mainframe                       |
| OCA  | Office of Client Advocacy                                    | Mainframe                       |
| OIG System                                   | Office of Inspector General                                  | Mainframe                       |
| Overpayments                                 | Overpayments   | Mainframe                       |
| Plan of Care                                 | Plan of Care   | Mainframe                       |
| PB Authorizations                            | PB Authorizations  | Mainframe                       |
| Personal Care Authorizations                 | Personal Care Authorizations                                 | Mainframe                       |
| PS2 Inquiry                                  | PS2 Inquiry  | Mainframe                       |
| Public School Nutrition Program              | Public School Nutrition Program                              | Mainframe                       |
| Reconciliations (ARROW) (F)                  | Reconciliations (ARROW) (F)                                  | Mainframe                       |
| Sales Tax Refunds                            | Sales Tax Refunds  | Mainframe                       |
| Short-Term Authorizations                    | Short-Term Authorizations                                    | Mainframe                       |
| Smart Start                                  | Smart Start  | Mainframe                       |
| SSI/DCP                                      | Supplemental payments  | Mainframe                       |
| SQL Reporting Services                       | OKDHS Live   | Web                             |
| Supplemental payments                        | Supplemental payments  | Mainframe                       |
| TANF   | Temporary Assistance for 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                       |
| Voluntary Day Care                           | Voluntary Day Care   | Mainframe                       |
| Web PIN System                               | Web PIN System   |                                 |

#### J.1.14. Data Warehouse System

J.1.14.1. 10g environment

- J.1.14.2. Oracle – Oracle Database 10g Enterprise Edition Release 10.2.0.1.0
- J.1.14.3. Oracle SQL Plus Version 10.2.0.1.0
- J.1.14.4. Oracle Enterprise Manager - Version 10.2.0.0.0
- J.1.14.5. Brio/Hyperion – Hyperion Designer 8.5.0.243 Windows XP
- J.1.14.6. Toad Version 9.0.1.8
- J.1.14.7. Data Stage – Version 7.5.2
- J.1.14.8. WebFOCUS – 7.6.11
- J.1.14.9. USS iWay Adapter 7.6.11
- J.1.14.10. iWay Service Manager 5.6
- J.1.14.11. iWay Data Migrator 7.6.11
- J.1.14.12. iWay(FFS) P1 7.6.11
- J.1.14.13. TeleAtlas Matchmaker
- J.1.14.14. ARCSDE 9.1
- J.1.14.15. ArcIMS Adaptor
- J.1.14.16. ArcIMS 9.1
- J.1.14.17. Report Caster 7.6.11
- J.1.14.18. Windows 2003 Server
- J.1.14.19. z/VM z10 Server (mainframe)

**J.1.15. Imaging and Electronic Filing Systems**

- J.1.15.1. MasterScan Workflow Version 1.0; Business Imaging Systems
- J.1.15.2. App Xtender Version 5.30.068 (Server); EMC Documentum/Legato
- J.1.15.3. App Xtender Version 5.30.082 (Client); EMC Documentum/Legato
- J.1.15.4. Web Xtender Version 5.30.035.0; EMC Documentum/Legato
- J.1.15.5. License Server Version 6.60.049; EMC Documentum/Legato
- J.1.15.6. Ascent Capture Version 7.5 SP4; Kofax
- J.1.15.7. Remote Print Manager Version 4.5; Brooks Internet Software
- J.1.15.8. PDFCreator Version 0.9.3; Open Source

**J.1.16. Document Generation System**

- J.1.16.1. DocGen2 - Version 2.2.015; TCI
- J.1.16.2. DocGen2 - Version 2.1.004; TCI
- J.1.16.3. DocGen Security - Version 8.1.7; TCI
- J.1.16.4. DocGen2 Web Service - Version 2.1.0; TCI
- J.1.16.5. Adobe Central Output Server - Version 5.6; Adobe
- J.1.16.6. Adobe Download Manager - Version 2.0; Adobe
- J.1.16.7. Adobe Form Server Version - 5.1; Adobe
- J.1.16.8. DCM Service Installation - Version 6.0.0; IKON
- J.1.16.9. DCM Service Web Interface – Version 6.0.0; IKON
- J.1.16.10. Lead Tools 14.5 .NET - Version 1.0.0; Unk
- J.1.16.11. Cryptography - Version 1.0.0; Unk
- J.1.16.12. Disk Image DISC-PDF56 - Version 1.0.0.0; IKON

J.1.16.13. FreeFlow Output Manager - Version 6.0; Xerox

**J.1.17. Software Operating Systems**

J.1.17.1. Mainframe z/OS

J.1.17.1.1. z/OS 1.10

J.1.17.1.2. z/OS REXX Compiler 1.4

J.1.17.1.3. z/OS V1 C/C++ 1.6

J.1.17.2. Mainframe z/VM

J.1.17.2.1. z/VM 5.2

J.1.17.2.2. SCO UNIX

J.1.17.2.3. SUSE Linux Enterprise Server v10

J.1.17.2.4. Linux Kernel 2.6; 5-glibc-2.3.3 and up zSeries 64bit

J.1.17.3. HP UNIX

J.1.17.3.1. HP UX 11.0; 11.11

J.1.17.4. Linux

J.1.17.4.1. Suse Enterprise Linux 10.0

J.1.17.4.2. RedHat Enterprise Linux 5 – Advanced Platform

J.1.17.5. Microsoft Windows

J.1.17.5.1. Windows XP Professional, SP2

J.1.17.5.2. Windows XP Tablet Edition, SP2

J.1.17.5.3. Windows Server 2003 Standard Edition

J.1.17.5.4. Windows Terminal Server

J.1.17.5.5. Windows Terminal Server 2003 Web Edition

J.1.17.5.6. Windows 2003 Enterprise Edition

J.1.17.5.7. Windows Server 2008

**J.1.18. General Software**

J.1.18.1. Microsoft Project 2003

J.1.18.2. Microsoft Exchange 2003

J.1.18.3. Microsoft WSUS

J.1.18.4. Altiris

J.1.18.5. Microsoft Host Access Server

J.1.18.6. Terminal Services

J.1.18.7. HP Insight Manager

J.1.18.8. Remedy

J.1.18.9. Microsoft ISA 2006

J.1.18.10. IIS 6.0

J.1.18.11. Radius Server

J.1.18.12. Adobe

J.1.18.13. DB2 Connect Client

J.1.18.14. HIS

J.1.18.15. ODBC

J.1.18.16. Apache Tomcat 5.5.17  
J.1.18.17. Java 1.5.0\_09  
J.1.18.18. Visual Explain Plugin for Control Center  
J.1.18.19. Visual Explain  
J.1.18.20. Adobe Flash Player 10 ActiveX  
J.1.18.21. Adobe Flash Player 10 Plugin  
J.1.18.22. Adobe Shockwave Player  
J.1.18.23. ATI - Software Uninstall Utility  
J.1.18.24. AR System User  
J.1.18.25. ATI Display Driver  
J.1.18.26. Client Contact Manager  
J.1.18.27. IBM Rational Method Composer  
J.1.18.28. RealPlayer  
J.1.18.29. Windows Imaging Component  
J.1.18.30. QuickTime  
J.1.18.31. Roxio Express Labeler  
J.1.18.32. BMC Remedy Alert  
J.1.18.33. Microsoft Silverlight  
J.1.18.34. Attachmate EXTRA! X-treme  
J.1.18.35. Microsoft Office 2007 Service Pack 2 (SP2)  
J.1.18.36. Microsoft Office 2003 Standard  
J.1.18.37. Microsoft Office 2010  
J.1.18.38. Microsoft Office 2003 Access  
J.1.18.39. Microsoft Office 2003 FrontPage  
J.1.18.40. Microsoft Office Visio for Enterprise Architects  
J.1.18.41. Microsoft Office 2003 Web Components  
J.1.18.42. Microsoft Lync 2010  
J.1.18.43. Windows Mobile 5.0 SDK R2 for Smartphone  
J.1.18.44. DB2 Connect Enterprise Edition  
J.1.18.45. IBM Rational PurifyPlus for Windows  
J.1.18.46. Roxio RecordNow Audio  
J.1.18.47. Adobe Reader  
J.1.18.48. Roxio RecordNow Copy  
J.1.18.49. Broadcom Gigabit Integrated Controller  
J.1.18.50. IBM Rational RequisitePro  
J.1.18.51. Microsoft XML Parser  
J.1.18.52. Oracle JInitiator  
J.1.18.53. Microsoft Office 2003 Project Professional  
J.1.18.54. Microsoft Office 2003 Visio Professional  
J.1.18.55. Adobe Flash Player 10 ActiveX

J.1.18.56. Adobe Shockwave Player

J.1.18.57. AR System User

**J.1.19.** z-Server Software

J.1.19.1. ACF2/DB2 1.2 -SP01-CA

J.1.19.2. ACF2/MVS 8.0-SP03-CA

J.1.19.3. AFP Fonts 1.1

J.1.19.4. AFP Workbench – IBM

J.1.19.5. ASG Document Direct 2.3 (fka Mobius)

J.1.19.6. Application Performance Analyzer V1R1

J.1.19.7. Breeze SCLM 1.1

J.1.19.8. C/370 LIBRARY 2.2.0

J.1.19.9. CL Supersession 147 – Candle

J.1.19.10. Common Services 11.0 – CA

J.1.19.11. Connect Direct (NDM) 4.3.00 - Sterling Commerce

J.1.19.12. Data Dictionary – IBM

J.1.19.13. Data Facilities SMS DSS - IBM

J.1.19.14. Data Facilities SMS HSM - IBM

J.1.19.15. Data Facilities SMS RMM - IBM

J.1.19.16. Data Facilities Sort 14.0 – IBM

J.1.19.17. DB2 Administration Tool 7.01

J.1.19.18. DB2 Manager 3.1.0

J.1.19.19. DB2 Performance Monitor 8.01

J.1.19.20. DB2 Server for OS/390 9.1

J.1.19.21. DB2 Utilities Suite 8.01

J.1.19.22. DBEdit 3.2

J.1.19.23. Debug Tool V5 – IBM

J.1.19.24. DEXAN/IMS

J.1.19.25. DEXAN/MVS

J.1.19.26. DocuText 5.9.2.A Diversified

J.1.19.27. Enterprise COBOL for z/OS

J.1.19.28. Enterprise PL/I for z/OS

J.1.19.29. EXLM

J.1.19.30. Fault Analyzer V5.1- IBM

J.1.19.31. File Manager V5.1- IBM

J.1.19.32. Finalist 7.73 - Group1

J.1.19.33. FOCUS 7.2.7 – IBI

J.1.19.34. IBI iWay 7.6.11

J.1.19.35. IBM Ported Tools for z/OS 1.1

J.1.19.36. IBM QMF 8

J.1.19.37. IBM Tape Tools Suite  
J.1.19.38. IMS 11  
J.1.19.39. IMS ACF2 Interface 6.5  
J.1.19.40. IMS Batch Terminal Simulator 3.1  
J.1.19.41. IMS Connect 1.1  
J.1.19.42. IMS DB Control Suite 3.1  
J.1.19.43. IMS DB Recovery Facility 2.1  
J.1.19.44. IMS ETO 3.1  
J.1.19.45. IMS File Manager – IBM  
J.1.19.46. IMS High Performance Load - 2.1  
J.1.19.47. IMS High Perf. Pt. Checker - 2.1  
J.1.19.48. IMS High Perf. Unload - 1.1  
J.1.19.49. IMS Image Copy Extensions - 3.2  
J.1.19.50. IMS INDEX Builder - 2.3  
J.1.19.51. IMS Library Integrity Utility 1.1  
J.1.19.52. IMS ORS 1.1  
J.1.19.53. IMS Parallel Reorg 3.1  
J.1.19.54. IMS Performance Analyzer 3.3  
J.1.19.55. IMS/ESA HW Data Compression 2.2  
J.1.19.56. Infoprint Server  
J.1.19.57. Infoprint - APF-to-Post Script Transform  
J.1.19.58. Integrated Catalog Forward Recovery  
J.1.19.59. MXG 23.09  
J.1.19.60. Netview File Transfer Program 2.2.1  
J.1.19.61. Network Control Program (NCP) 7.8  
J.1.19.62. OMEGAMON for IMS  
J.1.19.63. Open Connect File Transfer Product  
J.1.19.64. Overlay Generation Language 1.1  
J.1.19.65. Page Printer Formatting Aid 3.2  
J.1.19.66. Platinum Transcentury Calendar Routines  
J.1.19.67. Platinum Transcentury Date Logic Generator  
J.1.19.68. Print Service Facility Base 3.4  
J.1.19.69. Print Service Facility Compatibility Fonts  
J.1.19.70. PRO/JCL 2.6.0.A - Diversified  
J.1.19.71. Quick-Ref R6.3 - ChicagoSoft  
J.1.19.72. Resource Management Facility  
J.1.19.73. SAS 9.1.2 - SAS Institute  
J.1.19.74. Sub-Capacity Reporting Tool 11.3 – IBM  
J.1.19.75. SYSPROG 1.0  
J.1.19.76. System Support Programs (SSP) 4.8.0

- J.1.19.77. Tivoli Job Scheduling Console 1.4
- J.1.19.78. Tivoli Management Framework 4.1.1
- J.1.19.79. Tivoli Netview 1.4 – IBM
- J.1.19.80. Tivoli OMEGAMON II for MVS V520
- J.1.19.81. Tivoli OMEGAMON XE V220
- J.1.19.82. Tivoli OMEGAVIEW II for Enterprise V300
- J.1.19.83. Tivoli Storage Manager z/OS API 5.3.3
- J.1.19.84. Tivoli Storage Manager Server 5.3.3
- J.1.19.85. Tivoli Workload Scheduler 8.2-
- J.1.19.86. Tivoli OMEGAVIEW V300
- J.1.19.87. ViewDirect for MVS 6.3

**J.1.20. z/VM Software**

- J.1.20.1. COBOL Compiler
- J.1.20.2. DB2 Connector
- J.1.20.3. EasySpooler
- J.1.20.4. FOCUS 6.8.5
- J.1.20.5. GLANPLUS B.09.01
- J.1.20.6. HP-UX 11.0 & 11.11
- J.1.20.7. OMNIBACK II Version 2.55
- J.1.20.8. Oracle Client 10G
- J.1.20.9. Samba – z/VM
- J.1.20.10. Tivoli Storage Manager B/A Client 5.3.3
- J.1.20.11. Web FOCUS – IBI
- J.1.20.12. DFSMF for z/VM
- J.1.20.13. DRMAINT
- J.1.20.14. Microfocus Server Express
- J.1.20.15. ORACLE (Child Welfare) 10.2.03
- J.1.20.16. Velocity – ESALPS

**J.1.21. Database Types**

- J.1.21.1. IMS Version 11 (on z-Server)
- J.1.21.2. DB2 Version 9.5 (on z-Server)
- J.1.21.3. Oracle Version 10.2.03 (on separate LPAR of the z-Server running SUSE Linux Enterprise Server Version 10)
- J.1.21.4. Oracle Version 9.2.0.8 (on HP N4000 running HP-UX Version 11)
- J.1.21.5. Oracle 10.2.01 (on servers running Windows 2003)
- J.1.21.6. SQL Server 2008
- J.1.21.7. Microsoft Access

**J.1.22. Database Sizes in Production**

- J.1.22.1. IMS – 2.3 TB
- J.1.22.2. DB2 – 500 GB



- J.1.22.3. Oracle on Linux (Child Welfare) – 617 GB
- J.1.22.4. Oracle on Linux (Data Warehouse) – 117 GB (not fully deployed)
- J.1.22.5. Oracle on Windows (Data Warehouse) – 500 GB
- J.1.22.6. SQL Server (s) – 767 GB (192 GB is Enterprise Data)

**J.1.23. Security Software**

- J.1.23.1. Microsoft Active Directory Security
- J.1.23.2. UNIX Security on UNIX Systems
- J.1.23.3. LDAP on Linux Systems
- J.1.23.4. CA/ACF2 on the z/OS System
- J.1.23.5. Microsoft ISA 2006
- J.1.23.6. McAfee Antivirus/Spyware
- J.1.23.7. Virtual Private Network (VPN) Client
- J.1.23.8. Radius
- J.1.23.9. Websense
- J.1.23.10. Access Control List (ACL)
- J.1.23.11. Intrusion Detection System (IDS)
- J.1.23.12. Encrypting File System (EFS)

**J.1.24. Firewall (Border Infrastructure)**

- J.1.24.1. Juniper ISG2000
- J.1.24.2. 4 Gbps firewall, 2 Gbps 3DES/AES VPN,

**J.1.25. Firewall (other)**

- J.1.25.1. Juniper SSG5
- J.1.25.2. 160 Mbps firewall,
- J.1.25.3. 40 Mbps 3DES/AES VPN

**J.1.26. Firewall Services Modules**

- J.1.26.1. Cisco 6509 FWSM
- J.1.26.2. Throughput – 5 Gbps
- J.1.26.3. Concurrent Connections – 1,000,000

**J.1.27. Intrusion Protection System**

- J.1.27.1. IBM Proventia 5208 IPS/IDS
- J.1.27.2. Throughput 2Gbps
- J.1.27.3. IBM Proventia 5008 IPS/IDS
- J.1.27.4. Throughput 400 Mbps

**J.1.28. SSL VPN**

- J.1.28.1. Juniper SA6000

**J.1.29. Network Access**

- J.1.29.1. Frame Relay

J.1.29.2. Metro Ethernet

J.1.29.3. T1

J.1.29.4. Fractional T1