

Defense Logistics Agency Information Technology Solutions



MARCH 2007

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RECENT CHANGES

Changes made during the past 12 months (**most recent changes listed first**).

1. **March 2007**
 - a. added a quick description and the link to the GSA *Buy Accessible Wizard* in Section 1.7 Section 508 of the Rehabilitation Act. It is just above the Strategic Direction.
 - b. Renamed table 43 to Electronic business/electronic commerce to match the section name and moved Microsoft Site Server from table 60 to table 43 as Site Server is e-Commerce related.
 - c. Added Netscape Directory Server to table 73 for use only with the IDE program
 - d. Added Verity Response and NiceLog to table 82.
2. **February 2007**
 - a. Table 12 (Section 508) per Apr 06 ITCR, added ZoomText Magnifier/Reader
 - b. Table 34 removed “Mercury Interactive” as this is the name of the company, not a product
 - c. Table 39 Relational Database – added Oracle 10g – it’s running in the EDC after several sites migrated their servers and applications. Received a copy of a TRB approval as well. Also, the DLA CERT issues periodic taskings for Oracle. Also added a footnote to follow DISA STIGs.
 - d. Table 56 (GIS) added Google Earth for **J6E personnel** – must comply with the DOD requirements for shareware and mobile code use – or the IAM will have to develop a plan to mitigate any risks.
 - e. Table 58 (Access Control) – renamed RSA ClearTrust to RSA Access Manager
 - f. Table 86 (COOP) - added BrightStor ARCServe to the Plan for Removal
 - g. Table 57 (VPN) - added Juniper Neoteris to the “Approved” column and moved Aventail to “Not Approved” as Aventail is not CAC enabled.
 - h. Table 71 Wireless LAN Laptops - added Network Chemistry to the “Approved” column, included a footnote, and added “rogue detection of wireless devices” to the fifth Strategic Direction in this section.
3. **January 2007**
 - a. Added Table 90 Portfolio Management - renamed ProSight to Primavera ProSight and renumbered all the remaining tables
 - b. Table 8 - added Microsoft Windows 2003 Enterprise .Net 2.0 SP3 to
 - c. Added a new section 6.16 Director's Recipe Database Management System and include table 102 for MasterCook.
 - d. Removed Rational Clearcase from table 31, as it is a CM tool, not a modeling tool
 - e. Updated tables 78, 79, 81, 87 to add IBM in front of Tivoli product names
 - f. Added new section 6.17 Common food management system (CFMS) to include a new table. The tools in this section are approved ONLY for CFMS
4. **October – December 2006 changes:**
 - a. Section 2.1 moved Netscape iPlanet to the “Plan for Removal” column and added a footnote to see Section 4.3.8, table 73.
 - b. Section 4.3.8 Added Microsoft’s Active Directory Application Mode (ADAM) to the Approved column and added Netscape iPlanet/Red Hat to the Plan for Removal column. iPlanet was used approved for Web server software but was used as a Naming and Directory service.
 - c. Section 1.7 ‘Section 508’ Added the needs assessment quote from the www.tricare.osd.mil/cap website to page 17 below Table 12. Corrected the third strategic direction to refer to 2.8 Section instead of Section 3.8.
 - d. Table 52 Product Data Management added BMTW to the Plan for removal column
 - e. Table 54 (LSS) added Minitab and iGrafx to the ‘Approved’ column and moved Sigmazone to ‘Plan for removal’ column. Added two footnotes.
 - f. Table 55 – added Adobe Captivate
 - g. Table 19 - Macromedia bought Cold Fusion, renamed Macromedia Cold Fusion MX-7; footnote added
 - h. Table 32 4GL Application Client Builders- added Visual C#
 - i. Table 31 - CA bought Platinum; footnote added:
 - i. Renamed Platinum BPwin 2.5 to CA AllFusion Process Modeler
 - ii. Renamed Platinum ERwin 3.6 to CA AllFusion ERwin Data Modeler

- iii. Renamed Platinum ModelMart to CA AllFusion Model Manager
- j. Tables 60 and 76 - Microsoft bought Sybari Antigen; renamed to Microsoft Antigen; footnote added
- k. Tables 34 & 55 - HP bought Mercury in November 2006, the product names weren't changed; footnotes added
- l. Tables 57, 58 & 64 - EMC bought RSA in September 2006 footnotes added
- m. Added definitions to sections 3.5.7 Business Intelligence, 3.5.8 Reports, 3.5.9 OLAP, 3.5.10 Data Mining, and 3.5.11 Statistical Analysis
- n. Added Optimus OptiCore / OptiMedia to a new section 6.15 FED LOG and new table (101)
- 5. July – September 2006 changes**
 - a. Updated Table 63 Public Key Infrastructure to include the Tumbleweed products that are required for OSCP to work. These were not included in the initial request. Includes VA responder, repeater, Standard and enterprise Desktop Validators and Web Server Validators.
 - b. Updated table 34 to remove “any” from PL/SQL and Java
 - c. Renamed the Rational products to IBM Rational (ex: IBM Rational Clearcase).
 - d. Added Geographic Information System to Section 3.6 Business Applications. Reason: under DLA General Order 11-98, DLA assumed the map catalog function from the National Imagery and Mapping Agency
 - e. Updated the index to include all products in Table 79 Monitoring and Reporting
 - f. Added 1.5.1.3 Virtual Server
 - g. Teammate is in table 66 – only to be used by the auditors – DoD IG tool
 - h. Updated table 78 to include Quest InTrust per J-61 and J-64 approval
 - i. Added 6.14 Resource Conservation and Recovery Act for hazardous waste management
 - j. Updated version of Milestone Professional to 2004 (Table 10)
- 6. June 2006 changes:**
 - a. Added Fenestrae Faxination and Blue Pumpkin to section 4.4.6 Call Center – products were reviewed and approved for use in Aug 2004 but weren't added
 - b. Added PureEdge and Silanis to Table 9 Office Automation Software. These tools are required for USA and USAF OERs and NCOERs. The transition period from Form Flow to PureEdge and Silanis started on 6/15/2006. After the 120 day transition period, the Army Human Resource Command will not accept OERs and NCOERs completed in Form Flow.
 - c. Standardized naming convention of “Microsoft”. Previous references used either “Microsoft” or “MS” as prefixes.
 - d. Added Defense Property Accountability System (DPAS) to new section 7.10; DoD Mandated system. Includes Zebra Printers, Intermec scanners and Microsoft ActiveSync 3.8
 - e. Added SeeBeyond ICAN V5 to the Approved for Use column and Added SeeBeyond e*Gate in the “Plan for Removal” column.; ICAN V5 replaces e*Gate)
 - f. Added DoD Certified records management software website to section 5.2.1.2
- 7. April and May 2006 - there were no updates**
- 8. March 2006–**
 - a. moved Axent Raptor Mobile to the ‘plan for removal’ column, as the Firewall table has Axent Raptor in the ‘plan for removal’ column
 - b. Corrected footnotes to reflect the renumbering of the sections; footnotes referred to section 7, which is now Section 6.

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Introduction

Information Technology (IT) Solutions are components that are identified and used as common building blocks across DLA to provide services that support the DLA mission. The objectives of these solutions are to: Reduce acquisition costs, increase security, ensure interoperability, and promote information sharing.

Common IT solutions represent solutions that have been widely accepted both within the market and within DLA. The purpose of presenting solutions as part of the DLA Information Technology Architecture is to simplify procurement decisions at all levels and to promote seamless interoperability both within DLA and between DLA and the greater Department of Defense community. While there will always be niche, specialized requirements, the common support solutions presented here should satisfy 95 percent of user's functional information technology requirements. Section 2 of this document identifies a set of *minimum* configurations for various types and classes of computing platforms used within the Agency. The remaining sections describe common support solutions in four broad categories: web environment solutions, corporate applications solutions, infrastructure solutions, and solutions related to specific DoD level systems. Solutions must respond to a myriad of complex functional requirements depending upon the specific organization environment and mission needs. Elements of one solution may also be part of other solutions. For example, Microsoft Outlook 2003 is part of the Productivity solution in the office environment. It is also the solution to workflow and group scheduling.

Strategic Direction:

- Migrate to the current version of all products under maintenance within twelve months of general adoption of the product in the market. Versions of products no longer covered by maintenance should be removed as soon as possible.
- Adopt a common, consistent process for product investigation, insertion, and removal across the Agency.

1. Computing Platforms

In the context of this section, the computing platform consists of computing hardware and operating system services, and may be based on the considerations of the external environment in which the computing platform is placed. Section 1.1 through 1.4 discuss computing hardware, which includes a central processing unit(s) (CPU), input and output (I/O) interfaces, main memory, buses and peripherals. These sections describe the standard *minimum* configurations for each class of machine as required to support the DLA mission. Specific requirements may dictate the need for additional RAM, disk capacity, or additional components. However, no equipment shall be purchased that does not meet the minimum configurations.

Section 1.5 addresses Operating System Services, which consist of an Operating System (OS), application programming interfaces (API) and a human computer interface (HCI), control system resources in a single machine or distributed environment.

The remaining parts of this section address general software to support the office computing environment, special purpose systems to support collaboration from the desktop, and guidance related to meeting the unique needs of challenged users.

1.1 Desktop and Notebook Computers

Most DLA employees use desktop computers. These desktops provide DLA users access to mission area applications, office automation applications, and critical information required to accomplish the mission. Not all desktop users require the same processing power, features, and capabilities. Tailoring desktop configurations to meet mission requirements can result in appreciable savings to DLA.

Not all of the business functions of DLA are performed by a user in a fixed location or one wired into the DLA IT infrastructure. Remote access to DLA applications can be satisfied for these users with Notebook computers equipped with PC Card (formerly PCMCIA) communications devices. Notebook configurations can vary widely in processing power, memory, hard drive capacity, screen characteristics, weight, and accessories. Along with the variety of configurations comes a wide range of cost.

It is important to clearly assess the planned uses of the Desktop or Notebook computer before determining which unit to purchase. To support the decision process, there are five classes of desktop and notebook computers that form the basis for Blanket Purchase Agreement (BPA) line items: Standard Desktops, Performance Desktops, lightweight Notebooks, Standard Notebooks and Performance Notebooks.

In addition to Notebooks, mobile computing includes Personal Digital Assistants. These handheld devices commonly support personal scheduling and reminders. Depending upon specific requirements, they can also provide word processing and spreadsheet capabilities, and access to E-mail.

The Gateway contract for Desktop and Notebook configurations is in the Gateway BPA:

<https://hqcnet.hq.dla.mil/j-6/j-63/Contracts/pcbpa.pdf>

The most up-to-date configurations for Desktop and Notebook computers can be found at:

<http://esource.gateway.com/default.asp?mscssid=4280384>

Strategic Direction:

- Procure desktops and laptops from the Gateway BPA <https://esource.gateway.com/dla2>
- These configurations are minimums for acquisitions. Each field site may choose to exceed these configurations given the availability of funds.
- Promote market competition in procuring desktop computers while limiting permutations
- Use industry standard components and interfaces to deploy the standard implementation
- Leave room for expansion (e.g. memory slots, drive bays and expansion slots)
- Replace all desktops on a four year cycle. That is, ¼ of your desktop computers should be programmed for replacement each fiscal year. Monitors, keyboards, mice and peripherals should be replaced as needed, either as user requirements change or equipments fails.
- Migrate to Microsoft Windows XP within twelve months.
- Comply with DLA published security guidelines to minimize the risk of theft or loss of equipment or information assets.
- Acquire portable computers with port replicators in lieu of the additional cost of acquiring both a desktop and portable.

1.2 Handhelds**1.2.1 Personal Digital Assistants**

Personal Digital Assistants (PDA) include the group of small hand-held devices often used as personal organizer functions such as personal scheduling and contact lists. They generally use a stylus for input, but some also have keyboards. The upper end devices can be used to connect to a network to provide access to E-mail and the Internet.

PDAs and other small pen-based computing devices can also be used to complete forms and capture data in a machine-readable form at the location where the information is available. The major DLA applications may be forms-based, where the user will select an item by checking a box, writing short notes, or creating small drawings. Another feature is the ability to do electronic signature capture. PDAs can operate in a stand-alone mode where they store the data until they are connected to a network and download the information. One advantage over notebook computers is their small (hand-held) size and weight.

This section does not address special-use devices such as warehouse and inventory terminals. These devices are covered in the next section.

Strategic Direction:

- Manage the increased security threats of theft and data loss
- Use Windows based PDA to integrate with the DLA desktop or client/server environment
- Use Blackberry hardware and software indicated in 1.2.2 for wireless transmission of sensitive email.

TABLE 1. HANDHELD/PDA CONFIGURATIONS

	PDA
Operating System	<ul style="list-style-type: none"> • Microsoft Pocket PC • Palm Pilot OS 5.2 • Research In Motion Blackberry
Memory	<ul style="list-style-type: none"> • 32 MB
Peripheral	<ul style="list-style-type: none"> • Serial, IR • Docking cradle and/or PC Card slot

1.2.2 Handheld Wireless Messenger

Research In Motion (RIM) Model 957-8 Blackberry Messenger with S/MIME components is currently approved for use.

Strategic Direction:

- For data, strong authentication, non-repudiation and personal identification are required for access to DOD information systems in accordance with published DOD policy and procedures.
- Identification and authentication measures shall be implemented at both the device and network level.
- Follow DoD Policy , specifically:
 - DoD 8500.1 – Information Assurance (IA)," 10/24/2002
http://www.dtic.mil/whs/directives/corres/pdf/d85001_102402/d85001p.pdf
 - DoD 8100.2 Use of Commercial Wireless Devices, Services, and Technologies in the Department of Defense (DoD) Global Information Grid (GIG)," 04/14/2004
<http://www.dtic.mil/whs/directives/corres/html/81002.htm>

1.2.3 Digital Cell Phones.

Strategic Direction:

- DLA will continue to monitor these products, but will wait until the market matures before making recommendations.

1.2.4 Radio Frequency-Based Remote Terminal

Radio Frequency (RF)-based technology is used to support many types of wireless communications. RF devices can be hand-held, or mobile mounted terminals that communicate wirelessly on an encrypted connection with network-based systems to either read information stored in those systems or to update those systems with information collected remotely. Many types of RF devices are used to support depot and supply center operations.

TABLE 2. RF-BASED TERMINALS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Teklogix • Welch Allyn 	<ul style="list-style-type: none"> • MTX • Symbol Technologies 	

1.3 Servers

In the hardware context, servers are computers that generally provide specific computing services to multiple users. They can range in size and complexity from small office level machines that provide printer services for the immediate office environment to massively parallel processor servers that can support the central data warehousing needs of a large corporation with thousands of users.

1.3.1 Small Windows Servers

Small Windows servers often resemble large PCs except for the Windows Server operating system, greater memory, higher capacity SCSI disks, and other communications devices. Use Small Windows servers for the following needs:

Small single purpose server (i.e. dedicated small application server, dedicated web server, small file & print server, E-mail server for 50 or less users). Multipurpose server for a single, small site; for instance a server for local area network group applications.

Strategic Direction:

- Use most common industry server architecture for greatest compatibility and ease of installation and ease of use.
- Expand configuration as needed until requirements dictate upgrade to the Large Windows configuration.
- Adopt Microsoft server 2003 within 12 months of the release of the first service pack.

1.3.2 Large Windows Servers

This category of Windows server is designed to support a larger number of users than the Small Windows Server. They are often used as site or regional servers to handle as many as 500 users. These machines always have multiple CPUs, and a much greater memory and disk capacity than the small class of Windows server. Use Large Windows servers for the following needs:

- Multipurpose server for medium to large sites (i.e. 50 to 500 users).
- Multipurpose server for several applications, i.e. large E-mail servers, large web servers, data mart server, and wide area group applications.
- Functionality is covered under the Enterprise Data Center (EDC).

1.3.3 Unix Servers

Unix Servers are larger servers that will typically operate in a controlled environment with filtered power, high-speed network connections and common use peripherals. Some of these common use peripherals are shared disk arrays, monitor switch devices, and network backup

solutions. These common use peripherals should be used wherever possible. Uses for a Unix server include:

- Application Servers
- Web Servers
- Database Servers
- Data Mart Servers
- Data Warehouse

Strategic Direction:

- Use industry standard components and interfaces to define a limited number of standard deployment configurations based upon domain-specific requirements.
- Storage networks should be utilized where ever possible to limit upgrade expenditures
- Use Fiber Channel technology for disk array access.
- Leave room for expansion, such as memory, drive bays, and expansion slots to accommodate future requirements.

1.3.4 Corporate Unix Servers

Enterprise Servers will typically house multiple corporate applications and will operate in a controlled computer room environment with filtered power, high-speed network connections and common use peripherals. Some of these common use peripherals are shared disk arrays, monitor switch devices, and network backup solutions. Uses for an enterprise server include:

- ERP / SCM
- Corporate Applications (multiple)
- Data Warehousing
- Large Database Server

Strategic Direction:

- Use industry standard components and interfaces to define a limited number of standard deployment configurations based upon domain-specific requirements.
- Use of Common Storage Devices with Fiber Channel Technology
- Functionality is covered under the Enterprise Data Center (EDC).

1.3.5 Server Clustering

Critical missions often require applications with special non-stop processing. Those applications need to employ specific design techniques that provide robust, dedicated, and redundant data processing. A number of servers need to be available for fail-over processing. Clustering is a method for ensuring non-stop mission critical applications.

Clustering is a technique that uses two or more computers together in such a way that they behave as a single computer. With clustering, a hardware problem in one server immediately enables the processing to be passed to the backup server. Clustering improves the availability of the applications, scalability, and provides easier management. Higher availability is possible with the use of "fail over" clusters, in which resources can automatically move between 2 or more nodes in the event of a failure. Scalability is achieved by balancing the load of an application across multiple resources. Simpler management can be attained through the use of virtual servers, rather than managing each individual computer system.

Some applications (such as databases) need to be designed specifically to use clustering.

Strategic Direction:

- Maximize availability of critical mission applications through clustering
- Minimize server costs through clustering

1.4 Peripherals

A peripheral is any computer device that is not part of the essential computer (the processor, memory, and data paths). Some peripherals are mounted in the same case with the main part of the computer as are the hard drive, CD-ROM drive, and network interface cards. Other peripherals are outside the computer case, such as the printer and image scanner, attached by a wired or wireless connection.

1.4.1 Printers

Printers provide the ability to transfer information to a paper-like medium. These devices prepare output in grayscale or color, and a variety of media weights and sizes. Physical interface standards are important to allow the connection of these devices to a computer or network. Information transfer standards are important to allow application programs to send information to these devices. Printers include low/moderate speed for use on the desktop, those in the warehouse environment, and high speed LAN printers.

Strategic Direction:

- For network applications, select and configure printers that use the Hewlett-Packard PCL language
- Select printers that support direct network connection conforming to DLA network standards
- Use simple, geographically descriptive labels for the configuration and network naming of DLA printers for ease of use
- Use Windows 32-bit Application Programming Interfaces (APIs) for all applications in the Windows operating system environment. Do not build print drivers specific to the installed equipment
- Inkjet printers should not be used where the output constitutes an official record and must be retained in archives (e.g., acquisition documents).
- Use DoD approved printers for the Defense Property Accountability System (DPAS) program, see section 6.10

The table for Desktop Printer Configuration is on the following page.

TABLE 3. DESKTOP PRINTER CONFIGURATION

Factor	Specification
Resolution	• 600 dpi
Print Speed	• 8 pages per minute black and white
Interface	• Parallel / USB / Infrared
Page Description Language	• HP/PCL5

TABLE 4. LAN PRINTER CONFIGURATION

Factor	Specification
Resolution	• up to 1200 x 1200 dpi
Print Speed	• 32 pages per minute black and white • 16 pages per minute color
Interface	• 10baseT
Page Description Language	• Postscript 3 (emulation), PCL 5c (emulation), JEG, PDF

1.4.2 Scanners

Office scanners provide the capability to convert small documents to electronic form for limited storage, organization, and management at the office level. Documents scanned in the office environment can be sent as E-mail attachments to share with other individuals and organizations. They can also be converted to digital text documents for further editing in office word processors.

Strategic Direction:

- Choose scanners based on functional requirements for resolution versus speed

Minimum Configurations:

TABLE 5. DESKTOP SCANNER CONFIGURATION

Factor	Specification
Resolution	• 800 (not interpolated)
Color Depth	• Up to 36-bit input
Software Interface	• TWAIN or Image and Scanner Interface Standard (ISIS)
Dynamic Range	• 2.8 - 3.2
Hardware Interface	• Universal Serial Bus (USB), Small Computer System Interface II (SCSI), Parallel Port
Machine Style	• Flatbed or Single Sheet Feed
Document Size	• 8.5 X 11 (Letter)
Speed	• 1-2 pages per minute
Miscellaneous	• Optical Character Recognition software

1.4.3 Digital Cameras

Digital cameras store images digitally rather than recording them on film. Once a picture has been taken, it can be downloaded to a computer system, and then manipulated with a graphics program and printed.

Strategic Direction:

- Select devices with industry standard hardware interfaces and device driver support for DLA-defined desktop platforms
- Select devices that present and accept data using commercial standard interfaces for digital cameras
- Avoid cameras have only a serial interface for the transfer of images
- Use of proprietary software may be necessary to obtain optimal color matching.

Minimum Configurations:

TABLE 6. DIGITAL CAMERA CONFIGURATION

Factor	Specification
Resolution	• 5 Mega pixel resolution
Storage Type	• Smart Media, CD, or Compact Flash cards
Hardware Interface	• USB card reader or adaptor for PC card

1.4.4 Multifunction Peripherals

Multifunction peripherals are single machines that provide printer, copy, facsimile, and scanner capabilities. These devices are generally less expensive than the individual component peripherals. The downside is that they generally sub-optimize performance of some of the component capabilities. In addition, if the device fails, all component capabilities are lost. Now available are machines that make scanning as easy as copying and automatically send the scanned document as an attachment to an E-mail address of the users' choice.

Strategic Direction:

- Consider using multifunction peripherals in small offices where space is limited.

1.5 Software

Software is a general term for the various kinds of programs used to operate computers and related devices. Software is often divided into application software (programs that do work users are directly interested in) and system software (which includes operating systems and any program that supports application software). This section addresses both the operating systems and the software to support users in accomplishing their jobs.

1.5.1 Operating Systems

Operating systems provide the basic environment for running applications. Supported operating systems are available at the desktop, mobile and the server level, which provides DLA the flexibility it needs in designing and deploying logistics systems. DLA is committed to an

architecture based on open standards and compliance with the operating system standards in the DoD Joint Technical Architecture (JTA) for all corporate environments.

This includes compliance with the Defense Information Infrastructure (DII) Common Operating Environment (COE) for workstations and servers running GCCS and/or GCSS applications, and the Standard Operating Environment (SOE) for mainframes. The DII COE is not hardware based, but software based. DISA certifies the DII COE kernel for specific operating systems. Currently these include the services for managing the platform's processes, memory, devices, signals, and clock system. In addition, these operating systems must be further certified to support COE-defined Common Support Applications and Infrastructure Services.

1.5.1.1 Single-User Operating Systems

Single-user operating systems directly support only one person at a time. They support a mix of applications and provide a graphical user interface. An important consideration is to ensure that the operating system is compatible with applications used in the DLA environment.

Strategic Direction:

- Use commercial versions of COE-certified operating systems based on open standards in accordance with guidance in the DLA Information Technology Standards (with the exception of Personal Digital Assistants)
- Microsoft Internet Information Services should not be run on any single-user versions of Windows (due to security concerns).
- The reader should refer to sections 1.1, 1.2, and 1.3 for more detailed directions on which operating system to use for various classes of computers.
- Developers should not create applications using features of Microsoft Windows XP if they have users that are still running Microsoft Windows 2000

TABLE 7. SINGLE USER OPERATING SYSTEMS

	APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
Desktop	<ul style="list-style-type: none"> • Microsoft Windows XP Professional 	<ul style="list-style-type: none"> • Microsoft Windows 2000 Professional (to be replaced in FY 06) 	<ul style="list-style-type: none"> • Microsoft Windows 98 and earlier • Linux (all varieties) • Apple OS
Workstation	<ul style="list-style-type: none"> • Microsoft Windows XP Professional • Sun Solaris 8.0 	<ul style="list-style-type: none"> • Microsoft Windows 2000 Professional (to be replaced in FY 06) 	<ul style="list-style-type: none"> • Microsoft Windows NT Workstation 4.0 and earlier. Microsoft didn't have a Workstation 98 version. • Linux (all varieties)
Notebook	<ul style="list-style-type: none"> • Microsoft Windows XP Professional 	<ul style="list-style-type: none"> • Microsoft Windows 2000 	<ul style="list-style-type: none"> • Microsoft Windows 98 and earlier • Apple OS • Linux (all varieties)
Personal Digital Assistants	<ul style="list-style-type: none"> • Microsoft Pocket PC • Palm Pilot OS 5.2 • Research In Motion • Blackberry Messenger 	<ul style="list-style-type: none"> • Microsoft Windows CE • All previous versions of Palm OS 	<ul style="list-style-type: none"> • other proprietary OS • Microsoft DOS

1.5.1.2 Server Operating Systems

Server operating systems support multiple users simultaneously.

Strategic Direction:

- Use commercial versions of Common Operating Environment (COE) certified operating systems based on open standards in accordance with guidance in the DLA Information Technology Standards
- Linux is NOT to be used/budgeted/POM without specific prior approval of J-64. If the requestor obtains J-64 prior approval, they must:
 - Use only commercially supported versions of Linux.
 - Linux should only be run as a hardened configuration (with all non-essential services turned off).
- To ensure proper security, delay migrations to the newest version of Microsoft Windows Server until the first service pack is released.

TABLE 8. SERVER OPERATING SYSTEMS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Microsoft Windows 2003 Server ¹ • Microsoft Windows 2003 Advanced Server • Microsoft Windows 2003 Enterprise .Net 2.0 SP3 • HP-UX 11.0/11i • IBM/AIX 4.3 • Silicon Graphics Irix • Sun Solaris 10 (follow DISA STIG hardening guidance on Solaris 9) • Linux - <i>Hardened and Supported versions only, such as Red Hat.</i> ² • Sun Solaris 9 ³ • Sun Solaris 8 ⁴ 	<ul style="list-style-type: none"> • Microsoft Windows 2000 Server • Microsoft Windows 2000 Advanced Server • IBM OS/400 • Compaq Open/VMS 	<ul style="list-style-type: none"> • UNIX System V • UNIX BSD • Microsoft Windows NT 4.0 and earlier. Microsoft didn't have a Server 98 version. • Linux - <i>Non-Hardened versions</i> • Sun Solaris 7 • HP-UX 10.20 and older

¹ As of Nov 1, 2005 Windows 2000 Server and Windows 2000 Advanced Server will no longer be offered through the System Builder channel

² Linux IS NOT to be used/budgeted/POM'd without specific prior approval of J-64.

³ Sun has not announced a date to discontinue Solaris 9

⁴ Sun has not announced a date to discontinue Solaris 8

1.5.1.3 Virtual Server

A virtual machine is any multi-user shared-resource operating system (OS) that gives each user the appearance of having sole control of all the resources of the system. The original meaning of virtual machine is that of a number of discrete identical execution environments on a single computer, each of which runs an operating system. This can allow applications written for one OS to be executed on a machine which runs a different OS, or provide execution "sandboxes" which provide a greater level of isolation between processes than is achieved when running multiple processes on the same instance of an OS.

One use is to provide multiple users the illusion of having an entire computer, one that is their "private" machine, isolated from other users, all on a single physical machine. Another advantage is that booting and restarting a virtual machine can be much faster than with a physical machine, since it may be possible to skip tasks such as hardware initialization.

TABLE 9. VIRTUAL MACHINE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • VMWare GSX Server • VMWare Infrastructure III, includes ESX and Virtual Center • VM Workstation 5 		

1.5.1.4 Mainframe

Mainframes are traditionally large, multi-user, IBM plug-compatible computers. The mainframe operating systems used by DLA must adhere to DISA's Standard Operating Environment (SOE) specification. Mainframes provide information storage and processing services to users throughout DoD. They provide a central repository of data and information for corporate application and database servers and hence must be the most reliable component of the DLA technical architecture. Their most important function is maintaining the integrity of DLA corporate data.

DLA assumes the continuing existence of many mainframe applications and data repositories. Most of the mainframes in DLA are located in Defense Megacenters under the operational control of DISA. DISA has begun to standardize the Megacenter mainframe architecture with the development of the Standard Operating Environment (SOE). DLA will monitor the development of the SOE to see what impact this environment may have on DLA applications. Where business and economic reasons support a decision to alter DLA applications to utilize SOE standards, DLA will undertake those changes. DLA capacity planners will provide input to DISA regarding DLA support requirements but the final determination of hardware capacity and features remains with the Defense Megacenters.

Mainframes owned and operated by DISA to support DLA have migrated to the SOE for the mainframe. This environment includes OS/390. All applications must be migrated to this environment.

Strategic Direction:

- When developing multi-tier applications that operate with the legacy systems, emphasize open standards to provide future migration flexibility.
- Do not develop new applications on the mainframe.

1.5.2 Office Automation

Part of the information infrastructure of DLA includes software tools that support the work environment. Types of tools that fall under this heading include word processor, spreadsheet, database, presentation, personal information management (calendar/scheduler, E-mail front end), forms management, reporting, and program management. For the tools to support the work environment, users must be able to exchange documents and integrate different types of documents (i.e., word processor and spreadsheet).

Strategic Direction:

- Use the DLA productivity suite, which was purchased corporately
- Limit office automation tools to those products included in the product suites listed below
- Install product suites in their entirety and make available to the user
- DLA will adopt a common suite of commercial software for all activities
- Conversion of all desktops to Microsoft Office XP will be completed in 2002.

The list of approved Office Automation Software is on the next page.

TABLE 10. OFFICE AUTOMATION SOFTWARE

	APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
Productivity Suite	<ul style="list-style-type: none"> • Microsoft Office XP 	<ul style="list-style-type: none"> • Microsoft Office 2002 Pro 	<ul style="list-style-type: none"> • Corel Perfect Office • Microsoft Office 97 Pro
Word Processor	<ul style="list-style-type: none"> • Microsoft Word 2003 	<ul style="list-style-type: none"> • Microsoft Word 2002 	<ul style="list-style-type: none"> • Corel Word Perfect • Microsoft Word 97
Spreadsheet	<ul style="list-style-type: none"> • Microsoft Excel 2003 	<ul style="list-style-type: none"> • Microsoft Excel 2002 	<ul style="list-style-type: none"> • Microsoft Excel 97
Database	<ul style="list-style-type: none"> • Microsoft Access 2003 • Corel Suite Paradox ⁵ 	<ul style="list-style-type: none"> • Microsoft Access 2002 	<ul style="list-style-type: none"> • Microsoft Access 97 Pro
Presentations	<ul style="list-style-type: none"> • Microsoft PowerPoint 2003 	<ul style="list-style-type: none"> • Microsoft PowerPoint 2002 	<ul style="list-style-type: none"> • Microsoft PowerPoint 97 • Microsoft Paintshop Pro
Desktop Publishing	<ul style="list-style-type: none"> • Microsoft Publisher 2003 	<ul style="list-style-type: none"> • Microsoft Publisher 2002 • Adobe Page Maker 	
Personal Information Management	<ul style="list-style-type: none"> • Microsoft Outlook 2003 	<ul style="list-style-type: none"> • Microsoft Outlook 2000 	<ul style="list-style-type: none"> • Lotus Organizer • Microsoft Outlook 97
Forms Management	<ul style="list-style-type: none"> • PureEdge Viewer 6.5 ⁶ • Silanis ApproveIt Desktop • Adobe Acrobat 7 • PDF Fillable forms 	<ul style="list-style-type: none"> • Form Flow • JetForms JetForms 	
Document Publishing	<ul style="list-style-type: none"> • Adobe Acrobat 7 	<ul style="list-style-type: none"> • Adobe Acrobat 6 	
Graphics			
Diagramming	<ul style="list-style-type: none"> • Microsoft Visio 2003 	<ul style="list-style-type: none"> • Microsoft Visio 2002 	
Artistic	<ul style="list-style-type: none"> • Corel Draw 9 and 10 • Adobe Illustrator 9.0 	<ul style="list-style-type: none"> • Corel Draw 8 and earlier • Adobe Illustrator 7.0 and earlier 	
Photo	<ul style="list-style-type: none"> • Adobe Photo Shop 6 	<ul style="list-style-type: none"> • Adobe Photo Shop 5 and earlier 	
Project Management	<ul style="list-style-type: none"> • Microsoft Project 2003 • Milestone Professional 2004 • Milestone Viewer • Primavera TeamPlay 	<ul style="list-style-type: none"> • Microsoft Project 98 and earlier 	<ul style="list-style-type: none"> • Time Line Solutions Time Line

⁵ Approved only in conjunction with the Department of Labors' Workforce Recruitment Program

⁶ The transition period from Form Flow to PureEdge and Silanis starts 6/15/2006; after 120 days, OERs and NCOERs completed in Form Flow will not be accepted. For copies of the software either contact Sylvia Nance (DES sponsor) or download from the Army Small Computer Program at no cost: <https://ascp.monmouth.army.mil/scp/nocost/index.jsp?page=jetformwelcome>. Per J-61, each local Information Assurance Manager, through the local Configuration Control Board, will review and approve these tools for use under the Site Accreditation.

1.6 Desktop Video Conferencing

Video conferencing enables people at different sites to simulate face-to-face meetings in real time. Current video conferencing equipment options range from stationary systems installed in dedicated video conferencing rooms to desktop video units. In addition to voice and video, video conferencing systems may incorporate equipment that enables sharing of graphics and electronic documents. Desktop video conferencing links individuals rather than groups. Desktop application sharing is sometimes combined with desktop video conferencing.

Emerging into the video community are H.320 based desktop systems connecting individuals and small groups together via ISDN in Primary Rate Interface (PRI), Basic Rate Interface (BRI) or Tri- BRI configurations. These installations also allow for fully integrated (easy to use) T.120 collaborative computing applications (application sharing), white boarding, shared clipboard and rapid file transfers. This has proven to be an effective low-cost method of spreading VTC capability to a growing base of user groups. It represents an integrated voice, video, and data application. While desktop systems are capable of operating in an Internet-based TCP/IP environment, this type of system is not currently recommended unless a gateway to ISDN (TCP/IP - H.320 gateway device) is provided to handle long haul connections. LAN based desktop systems should be multi-purpose in that the system remains compatible with H.320 systems via an ISDN gateway and compatible with H.323/H.310 systems via the LAN, ATM LAN, ATM VLANS or ATM capable MAN. As ATM networks grow, less traffic will be routed to the ISDN gateways.

Strategic Direction:

- Encourage the use of video teleconferencing (VTC) technologies as a cost-effective alternative to traveling to attend meetings and as an alternate delivery mechanism for employee training
- Encourage the use of electronic document sharing during video conferencing.
- Assure interoperability by implementing VTC standards in accordance with the DLA IT Standards document
- Migrate from specialized VTC networks into the general network environment
- DLA will not implement a slow scan system; there will be a minimum of 15 frames per second

TABLE 11. DESKTOP VIDEO TELECONFERENCING SOFTWARE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • PictureTel 550 • Microsoft NetMeeting 3.01 	<ul style="list-style-type: none"> • Microsoft NetMeeting 3.0 and earlier 	

1.7 Section 508 of the Rehabilitation Act (Accessibility Options)

Section 508 of the Rehabilitation Act as amended, 29 U.S.C. Section 794d, requires that Federal agencies' electronic and information technology is accessible to people with disabilities and was implemented in June 2001. All DLA web sites and applications will be designed and developed in accordance with the One Book Chapter at <https://today.dla.mil/onebook/process/15.htm> and Web development coding standard available on the J-644 E-workplace site. These documents

provide DLA web developers guidance on Section 508 policy, procedures, and processes and how to code web sites and applications to ensure Section 508 compliance.

The One Book Chapter also provides guidance on a Section 508 exemption process. An exemption may be considered for one of the following reasons identified in the market research process and design phase:

- Undue burden
- National security system
- Commercial non-availability

Accessibility options also include workstations for the deaf and hard of hearing, those with low vision or are blind, those with mobility impairment, and those with cognitive impairments and communication disabilities. Below is a summary of workstation configurations from the Computer/Electronic Accommodations Program CAP.

Workstations for the deaf and hard of hearing include PC-TTY software and modem, Video Teleconferencing (VTC), stand-alone and compact TTYs, and assistive listening devices.

Workstations to address the needs of low vision users—A closed circuit television (CCTV) sits next to the computer monitor, on which is loaded screen magnification and screen reading software. On the CCTV is an augmentative communication device for people who are nonverbal, and above that there is an alternative keyboard with built-in trackball. Between the CCTV and the computer monitor is an amplified telephone with large buttons and an amplified headset.

Workstations primarily for blind users features screen reading software, an 80 character refreshable Braille terminal, scanner/reader software, a Braille embosser, keyboard caps for low vision persons, and a trackball.

Workstations to address persons with mobility impairments highlights technology transfer items and assistive technology. Features include: voice recognition software, both continuous speech and command and control is installed, along with an infrared cursor control mechanism with switch, and a hands-free computer interface originally developed by the Air Force Research Laboratories. This interface measures the mind's electrical signals and translates them into computer impulses for cursor and screen control, in conjunction with an on-screen keyboard. An infrared wireless keyboard for persons with mobility impairments completes the workstation.

Workstations for persons with cognitive disabilities and communication disabilities feature Optical Character Recognition (OCR) Scanner/Reader software installed on the computer. A portable electronic dictionary is pictured on the right side of the monitor. The workstation has a split key alternative keyboard and a trackball. The bi-level adjustable table, fully adjustable office chair, and document holder assist in illustrating appropriate workstation positioning to visitors.

Information on accessibility options is available from the Computer/Electronics Accommodations Program (CAP).

Computer/Electronic Accommodations Program
TRICARE Management Activity
5111 Leesburg Pike, Suite 810
Falls Church, VA 22041-3206

703-681-8813 (Voice/TTY)
 703-693-5160 (CAPTEC Voice), 703-693-6189 (CAPTEC TTY)
 cap@tma.osd.mil (E-mail)
www.tricare.osd.mil/cap

This is the link to the GSA *Buy Accessible Wizard* <http://app.buyaccessible.gov/baw/>. The buy accessible wizard is a web-based application that guides users through a process of gathering data and providing information about [Electronic and Information Technology](#) (E&IT) and [section 508 compliance](#).

Strategic Direction

- DLA shall participate with the CAP and follow Public Law⁷
- Follow DLA 508 compliance guidance as documented in eWorkplace
- For web development, see recommended tools in 2.8 Section 508 Web compliance tools

TABLE 12. SECTION 508 OF THE REHABILITATION ACT (ACCESSIBILITY OPTIONS)

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • 508 compliance products⁸ www.tricare.osd.mil/cap • ZoomText 9.0 Magnifier/ ScreenReader (by Ai²)⁹ 		

Standard Section 508 Statement for all DLA websites:

<https://dla1.eportal.dla.mil/irj/servlet/prt/portal/prtroot/com.sapportals.km.docs/ewpAgencyDocumentsPublic/HQ/J-6/J-64/J-644/Internet%20Policy/Standards/Standard%20Section%20508.html>

Section 508 Exemption Documentation:

<https://dla1.eportal.dla.mil/irj/servlet/prt/portal/prtroot/com.sapportals.km.docs/ewpAgencyDocumentsPublic/HQ/J-6/J-64/J-644/Internet%20Policy/Standards/Section%20508%20Exemption.html>

Workforce Investment Act of 1998, Pub. L. No. 105-220, 112 Stat. 936 (1998):

<http://www.usdoj.gov/crt/508/508law.html>

105TH CONGRESS 1ST SESSION H. R. 1255 To amend the Rehabilitation Act of 1973:

<http://www.acb.org/Resources/105th.html>

Office of the Attorney General, Memorandum For The Heads Of All Federal Agencies Subject:

Electronic and Information Technology, April 2, 1999: <http://www.usdoj.gov/crt/508/memohead.html>

⁷ Section 508 of the Rehabilitation Act of 1973 29 U.S.C. § 794(d):

<http://www.access-board.gov/pubs/laws.htm#508>

⁸ "Each needs assessment should be looked at on a case by case basis. It is important to remember that there are varying degrees and types of disabilities, and each needs assessment should be tailored to each person's job function. In order to maximize the effectiveness of the assistive technology, it is best to take a look at three different areas: The Job, The Individual, and The Solutions." www.tricare.osd.mil/cap

⁹ ZoomText is the only such software known to be approved for Navy Marine Corps Internet (NMCI)

2. Web Environment

A “web” is a collection of servers on a network that communicate with web browsers using the Hypertext Transport Protocol (HTTP). The most famous web is the World Wide Web, which is the collection of web servers publicly available on the Internet. The browser sends an HTTP request to a web server for a Hypertext Markup Language (HTML) document. After receiving the document, the browser displays it to the user. An HTML document can contain text, graphics, and links to other documents or to different sections of the current document in the form of Uniform Resource Locators (URLs). An HTML file can also contain embedded within it audio files, video files, 3D graphics, Virtual Reality Markup Language (VRML), or other document types. Finally, an HTML document can contain its own locally executed instructions (scripts) for fairly simple activities or full-blown applications in the form of Java applets or ActiveX objects, although some of these capabilities have inherent security concerns. A link can also refer to a Common Gateway Interface (CGI), which supports additional functionality on the server side of the connection, for example a database interface or added security processing.

An Intranet is differentiated from the Internet as being a network connecting an affiliated set of clients generally located behind a common firewall. This construct is often used to allow for web access to information that is meant for this restricted audience. Typically the same hardware/software configurations support both Internet and Intranet access. Intranets may be less costly to create, but as much or more to maintain. Thus it’s risky to regard intranets as low-cost investments.

Internet technology is an essential tool in reengineering DLA business processes. It provides a unique opportunity to obtain information from a variety of sources, to share DLA business information globally, or to selectively distribute business information within desired communities. DLA users must have the tools (i.e. search engines, viewers, and browsers) necessary to effectively use the Internet.

2.1 Web Server Software

A web server is a program that delivers the files to form web pages to browsers, as requested, according to a client/server model. The web server only implements transfer protocols (such as HTTP); the interpretation of the different file formats is left to the browser. Web pages are most often written in the HTML format. Microsoft and Netscape make the most popular web servers. However, Oracle, Novell, IBM and Apache also make viable web servers. Web servers most often are part of larger packages of Internet and Intranet related programs. Considerations in choosing a web server: How well does it work with the operating system and other servers? Does it have a search engine and a robust set of authoring tools?

A web server may also act as a front-end to traditional applications on other servers (for example, access to databases, document repositories, and the ad-hoc generation of forms and reports). CGI is a special language used by web servers to provide this interface. Java (developed by Sun Microcomputers) and Active-X (developed by Microsoft) are the languages of choice for implementing advanced features on web sites. However, currently there are security issues about using these tools. (See Strategic Direction below.)

Strategic Direction:

- Use enterprise contracts to acquire commercial web products
- Optimize the use of web interface to existing DLA applications
- Investigate the use of commercial security software to protect DLA resources
- Adhere to DoD mobile code policy: <http://www.c3i.osd.mil/org/cio/doc/mobile-code11-7-00.html>

TABLE 13. WEB SERVER SOFTWARE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Microsoft Site Server 3.0 • Microsoft Internet Information Server 6.0 • Oracle WEB Server • Macromedia Cold Fusion MX-7 ¹⁰ • IBM Websphere Application Server version 2.0 • Oracle Portal-to-Go • Oracle 9i Internet Application Server • Apache Web Server • Apache Tomcat Web Server 	<ul style="list-style-type: none"> • Netscape iPlanet Web Server Version 4.0 SP1 ¹¹ • Microsoft Internet Information Server 5.0 • Cold Fusion 	<ul style="list-style-type: none"> • Microsoft Internet Information Server 4.0 ¹² • Netscape Enterprise Server 3.6 ¹³

2.2 Web Browsers

A web browser is a special type of client that can interpret documents in web formats. The web browser has become an essential presentation tool for most system architectures. It provides an easy-to-manage, universal client interface for display of text, graphics, multimedia, and forms-based data. Additional “plug-in” applications and Java applets extend the browser’s capabilities.

Strategic Direction:

- Use the most recent version of approved browsers
- Obtain plug-ins only from reliable sources such as Microsoft and Netscape sites
- All browsers should support 128 bit encryption.

Table for Web Browsers is on the next page

¹⁰ Macromedia bought Cold Fusion in Dec 2005

¹¹ Red Hat bought Netscape iPlanet and rebadged it Red Hat Directory Server – see the Naming and Directory Services section. J6B used iPlanet as a directory service, but will migrate to ADAM

¹² Tap-It (used in DSCP) requires IIS4.0 until April 2006

¹³ Only to be used by DAPS in conjunction with DISA authentication tool

TABLE 14. WEB BROWSER PRODUCTS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Microsoft Internet Explorer 6.x with High Encryption Pack • Netscape Communicator 6.2 with 128-bit encryption • Mozilla Firefox ¹⁴ 	<ul style="list-style-type: none"> • Microsoft Internet Explorer 5.5 with 128 bit encryption 	<ul style="list-style-type: none"> • Microsoft Internet Explorer 7 ¹⁵ • Microsoft Internet Explorer 5 and earlier • Netscape Communicator 6 and earlier

2.3 Proxy Software

In an enterprise that uses the Internet, a proxy server is a server that acts as an intermediary between a workstation user and the Internet so that the enterprise can ensure security, administrative control, and caching service. A proxy server is associated with or part of a gateway server, which separates the enterprise network from the outside network, and a firewall server, which protects the enterprise network from outside intrusion.

A proxy server receives a request for an Internet service (such as a Web page request) from a user. If it passes filtering requirements, the proxy server, assuming it is also a cache server, looks in its local cache of previously downloaded Web pages. If it finds the page, it returns it to the user without needing to forward the request to the Internet. If the page is not in the cache, the proxy server, acting as a client on behalf of the user, uses one of its own IP addresses to request the page from the server out on the Internet. When the page is returned, the proxy server relates it to the original request and forwards it on to the user.

To the user, the proxy server is invisible; all Internet requests and returned responses appear to be directly with the addressed Internet server. (The proxy is not quite invisible; its IP address has to be specified as a configuration option to the browser or other protocol program.)

An advantage of a proxy server is that its cache can serve all users. If one or more Internet sites are frequently requested, these are likely to be in the proxy's cache, which will improve user response time. In fact, there are special servers called cache servers. A proxy can also do logging.

The functions of proxy, firewall, and caching can be in separate server programs or combined in a single package. Different server programs can be in different computers. For example, a proxy server may in the same machine with a firewall server or it may be on a separate server and forward requests through the firewall.

A proxy server helps match incoming messages with outgoing requests, and is in a position to also cache the files that are received for later recall by any user. Proxy servers, in addition to the Firewall, can route non-.mil URL traffic to go through ISP provided physical networks. The result to your internal user is faster access to non- .mil Web sites.

¹⁴ Recommended by DLA CERT as an alternative browser

¹⁵ IE 7 – there is a known issue with SAP, but at this time there is no known workaround. SAP intends to release an IE 7-compliant patch for the Portal software, but until then, IE 7 is not approved for use.

TABLE 15. PROXIES

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Microsoft ISA Server • Netscape Proxy Server 3.5 	<ul style="list-style-type: none"> • Microsoft Proxy 2.0 	

2.4 Web Development Tools

There are necessary capabilities beyond web servers and browsers that make it possible for the web to work. These include HTML editors, web site content management tools, web site scripting tools and languages, site usage tracking tools, web server management tools, site watchers and site grabbers.

There are a large variety of web page editors available with the goal of allowing any user to create HTML documents without having to actually write HTML. Each of the leading browser packages includes a basic HTML editor; however there are other products available, which provide additional functionality

Any tool selected should support:

- Frames
- Basic image manipulation (resize, brightness and contrast adjustment, transparency)
- Easy table creation
- Linkage for document preview in a web browser
- Support for automatic generation of navigation bars and other shared page elements
- The ability to apply a consistent style or “look and feel” to a collection of web pages

Any tool selected should have a track record for supporting new features as they are added to the appropriate web standards and as the leading browsers implement them.

Web pages can be extended to support a richer user interface or local application functionality through the use of procedural languages. There are two languages that can be applied at the document level (included in the document and interpreted at run-time) – JavaScript and VBScript. Other languages can be used to create application parts that are incorporated into a web page. These are typically implemented as Java applets or ActiveX parts, only if security concerns are addressed. This is an area where there is conflict between the two leading browser vendors, Netscape and Microsoft, and not every browser supports all these technologies. An essential stage in all web development must be the testing with access by all standard browsers.

2.4.1 Web Site Management and Publishing Tools

While most any user is capable of generating HTML documents, most are not capable of managing a web server. The most frequent day-to-day activity involved in web server or “site management” is updating the content of the server. There is now a class of tools typically referred to as “site managers” that provide a graphical user interface for adding and deleting files from web sites, moving elements of the site around (and automatically updating the changed links), link validation (to find broken links), and migration of sites from one server to another. These tools can also provide for version control and audit trail generation. In addition, software

exists which allows all team members to work on the same site at the same time with full version control and validation.

There are many functions that a web server system administrator needs to be able to perform. There should be some alert mechanism to make the administrator aware when web servers fail or reach specified traffic thresholds. For a heavily trafficked site, applying software tools that balance web server load across several web servers is a key approach to maintaining reasonable response times for users. The ability to test web server performance, to analyze traffic on local network segments to identify choke points, and the ability to monitor server activity in real time are all useful system administrator functions supported by these tools. Finally the ability to identify all web servers on an Intranet is useful – especially for finding unauthorized web servers.

There are also tools that allow non-real-time data analysis on HTTP server logs to identify who is accessing a web server and what sections of the server are being accessed.

Strategic Direction:

- Specific products are not mandated for web publishing but care must be exercised that the resultant HTML meets the standards specified in the DLA Information Technology Standards, and is compatible with approved browsers.

TABLE 16. WEB SITE MANAGEMENT AND PUBLISHING

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • WebTrends Analysis Suite • Macromedia DreamWeaver MX • Microsoft Visual Studio 6.0 • DeepMetrix Live Stat 6 	<ul style="list-style-type: none"> • Microsoft FrontPage 2003 • Media House Statistics Server • Macromedia DreamWeaver 4.0 	<ul style="list-style-type: none"> • Microsoft FrontPage 2002 and earlier • Macromedia DreamWeaver 2.0

2.4.2 Corporate Application Tools

In the personal computing the lines between web and business applications are blurring. The various user interface and control elements of the web browsers are being turned into programmable objects. The web browser is increasingly becoming the standard or preferred interface for information presentation. Associated with that function, the web also serves as the interface and infrastructure for a wide range of data search and retrieval technologies that make data, especially from legacy systems, available to the end user. These capabilities are typically made available through the use of a three tier or three layered architecture where the web browser is tier one, the HTTP (web) server and its associated applications (through CGIs) are tier two, and the database or other application server is tier three.

There are many initiatives under way to extend or replace HTML as the demands being placed on the web interface grow beyond the display of simply formatted static documents. These initiatives are under the auspices of the World Wide Web Consortium – the industry/education partnership that controls most WWW standards.

The need for more complex document formatting led to the development of Cascading Style Sheets (CSS). The desire for more interactive web pages led to the creation of Dynamic HTML (DHTML). And the eXtensible Markup Language (XML) is the proposed ‘follow-on’ to HTML.

At the present time, HTML is not designed to support procedural capabilities (i.e. the ability to execute application code or carry out some procedure). However, web pages can add procedural capabilities – primarily as extensions to the user interface – via client-side scripting or server-side scripting via embedded application parts or applets. The use of these proprietary extensions should be carefully controlled to ensure approved browser compatibility.

Strategic Direction:

- Specific products are not mandated but care must be exercised that the resultant HTML meets the standards specified in the DLA Information Technology Standards, and is compatible with approved browsers.

TABLE 17. CORPORATE APPLICATION TOOLS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Oracle Internet File System • MySAP.com version 2.11 • MySAP Enterprise Portal 		

2.4.3 Integrated Development Tools

It is estimated that within two years, 80% of database queries will be over the web. The web typically provides easier to use interfaces at lower costs to an expanded user base. Database access is typically provided by using the web browser as the user interface which talks through the web server to an application called a “middleware” package that in turn talks to the database server. The goal of the middleware package is to hide the differences and details of the interface to the various database servers from the developer who is setting up the web interface to the database. The user interface for querying the database is almost always via a form the user fills in with search terms, and the results are normally either displayed in a form or as lists of links the user can select to get more detailed information.

Any database middleware packages should support the ANSI SQL query language standard. Microsoft’s Open Database Connectivity (ODBC) is a de facto standard for vendor-independent database access and should also be supported.

TABLE 18. INTEGRATED WEB DEVELOPMENT TOOLS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Microsoft Visual Studio .NET 2005 • Oracle .com Suite • Oracle Internet Development Suite 	<ul style="list-style-type: none"> • Microsoft Visual InterDev 6.0 • Microsoft Visual Studio .NET 2003 	<ul style="list-style-type: none"> • Microsoft Visual Studio .NET 2002

2.5 Security

Any web application is a very public resource that must be well maintained with regard to security vulnerabilities to prevent compromise resulting from publication of erroneous data or denial of service.

The firewall is an integral part of security architecture, and its location must be reviewed with respect to web services being provided. This component is usually partnered with a software tool to identify any network intrusion attempts. Access ports are identified to support mission essential work.

Typically, firewall servers protect enterprise resources. Firewalls allow outgoing requests to go out, but screen incoming traffic before allowing it to enter the corporate network.

Active X imbedded segments as well as Java applets can cause security concerns on the client side of a web application.

The use of digital certificates is a key technology for positively identifying a web browser user to a web server. Certificates surpass passwords in providing strong security by authenticating identity, verifying message and content integrity, ensuring privacy, authorizing access, authorizing transactions, and supporting non-repudiation.

Secure Sockets Layer (SSL) is an extension to HTTP that provides for user authentication, added privacy and assurances of data integrity.

Web server security must support 128-bit encryption.

Official definition and delineation of security concerns and regulations are contained in the DLA Internet Policy, dated 1 May 1997 and DLA Regulation No. 5200.17, Security Requirements for Automated Information and Telecommunications Services, dated 9 June 1993.

TABLE 19. WEB SECURITY PRODUCTS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Verisign Secure Server • WaveSet Lighthouse 		

2.6 Internet Content Management Software

CMS performs Web-content filtering through uniform resource locator (URL) filters that monitors, manages and reports on unwanted traffic (unsavory Internet surfing) to increase business productivity. The system is customized to the access policies of the enterprise, which can include time quotas, time of day and specific filters (categories, specific sites, bandwidth management and so on), and to accommodate responses of continue/report, warn and discontinue.

TABLE 20 INTERNET CONTENT MANAGEMENT PRODUCTS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Surfcontrol • WebSense • Interwoven TeamSite/Open Deploy • Microsoft CMS 2002 • Interwoven TeamSite 6.5¹⁶ 	<ul style="list-style-type: none"> • Microsoft CMS 2001 	

¹⁶ Used in eWorkplace

2.7 Streaming Media.

Streaming Media: Streaming is a technology for playing compressed audio and video files (either live or prerecorded) from a Web page. With streaming media, the file is sent in a continuous stream and is played as it arrives, which allows a Web user to see and hear the file without waiting to download the large file. The media player uncompresses and sends video data to the display monitor and audio data to speakers. A media player is either part of a browser or downloaded from a software maker's Web site.

TABLE 21. STREAMING PRODUCTS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> Microsoft Windows Media Player version 10 for Windows XP 	<ul style="list-style-type: none"> Microsoft Windows Media Player version 9 for Windows 2000 	

2.8 Section 508 Web compliance tools

DLA must comply with all applicable provisions of Section 508 of the Rehabilitation Act, as amended by the Workforce Investment Act of 1998(P.L. 105-220), (www.section508.gov/index.cfm) when developing, procuring, maintaining, or using electronic and IT unless it is determined that compliance would impose an undue burden on the Agency, the system is classified as a national security system, or a compliant product is not commercially available. J-6 has a standard suite of Section 508 tools to facilitate compliance with this Federal law.

Strategic Direction:

- Include standard Section 508 Statement for all DLA websites [Link in eWorkplace](#)

TABLE 22. SECTION 508 WEB COMPLIANCE TOOLS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> Freedom Scientific JAWS for Windows v7.0 HiSoftware AccMonitor HiSoftware ACCVerify /AccRepair DS2 HiSoftware Link Validation Utility 	<ul style="list-style-type: none"> PageScreamer 3.04 and PageScreamer Spider (the vendor, Crunchy Technologies went bankrupt) 	

3. Mission Applications

Corporate business solutions consist of the hardware and software used to build corporate business applications such as financial and human resources management, material control, and transportation management. Normally procured or developed at the headquarters or business unit level, the focus of corporate business solutions is interoperability between DLA and the DoD community. It includes solutions that promote interoperability with the Defense Information Infrastructure (DII) Common Operating Environment (COE) and DoD-wide systems such as the Global Command and Control System (GCCS) and the Global Combat Support System (GCSS).

3.1 Mission Application Peripherals

A peripheral is any computer device that is not part of the essential computer (the processor, memory, and data paths) but is situated relatively close by. A near synonym is input/output (I/O) device. Some peripherals are mounted in the same case with the main part of the computer as are the hard drive, CD-ROM drive, and network interface cards. Other peripherals are outside the computer case, such as the printer and image scanner, attached by a wired or wireless connection.

3.1.1 Storage

Storage refers to the capability to store information outside the central processor. The predominant storage technology has been magnetic disk, which has the benefits of high reliability, decreasing cost-per-unit storage, and high data transfer capabilities. Optical storage provides high storage densities, low per-unit cost storage and moderate data transfer rates compared to magnetic storage. Optical storage is widely used for software distribution of static information and for archival storage of information.

Strategic Direction:

- Implement storage technology that uses open access standards, supports open device connection, and is platform independent
- Use RAID technology for server-based storage to maximize data availability
- Use SCSI host level interfaces for disk and peripheral devices. As the demand for higher data transfer rates and expanded connectivity requirements increase, PCI across Fibre Channel will be the appropriate long-term direction
- Use Compact Disk Recordable (CDR) or optical jukebox technology for long-term information archival
- Implement a Hierarchical Storage Management strategy for DLA records

3.1.2 Redundant Arrays of Inexpensive Disks

Redundant Arrays of Inexpensive Disks (RAID) technology provides improved data availability, error correction, and recovery features by distributing magnetic information across multiple drive units. The typical RAID array contains removable disk drive modules that are automatically rebuilt in case of a device failure, without causing the system to shut down. RAID is configurable to different levels depending on the data distribution and recovery architecture employed.

TABLE 23. REDUNDANT ARRAYS OF INEXPENSIVE DISKS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Dell PowerVault 660F • Compaq Ultra SCSI RA8000 • Sun Netra st A1000/D1000 • EMC CLARiiON 		

3.1.3 Storage Area Networks

A Storage Area Network (SAN) can be used for the application, data and systems file repository. SAN repositories have mirrored disks; back up capability and multi access paths to the application, data and system files.

Strategic Direction

- The SAN, as a minimum, must have redundant paths to all disks; must automatically mirror itself; must be able to back-up itself to other disks (isolated from the application)
- Fail-over capability will trigger execution transfer from one server to the next with immediate connection to the data, application and system files.
- Implement a “phone home” capability for SANs.
- Do not allow remote dial-in administration.

TABLE 24. STORAGE AREA NETWORKS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • EMC Power Path • SAN, Inc • Dell PowerVault 51F • Compaq StorageWorks RA4100 • Sun StorEdge Network FC Switch-8 • EMC Symmetrix 8000 • Hitachi 9900 	<ul style="list-style-type: none"> • EMC Connectrix Manager 	

3.1.4 Hierarchical Storage Management

Hierarchical Storage Management is a data storage system that automatically moves data between high-cost and low-cost storage media. HSM systems exist because high-speed storage devices, such as hard disk drives, are more expensive per byte stored than slower devices, such as optical discs and magnetic tape drives. While it would be ideal to have all data available on high-speed devices all the time, this is prohibitively expensive for many organizations. Instead, HSM systems store the bulk of the enterprise’s data on slower devices, and then copy data to faster disk drives when needed. In effect, HSM turns the fast disk drives into caches for the slower mass storage devices. The HSM system monitors the way data is used and makes best guesses as to which data can safely be moved to slower devices and which data should stay on the hard disks.

TABLE 25. HIERARCHICAL STORAGE MANAGEMENT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Veritas NetBackup Storage Migrator version 3.4 • Veritas Storage Foundation version 4.1 for Windows 	<ul style="list-style-type: none"> • Veritas Volume Manager for Windows 	

3.1.5 Network-Attached Storage

A network-attached storage (NAS) device is a server dedicated to file sharing. NAS allows more hard disk storage space to be added to a network that already utilizes servers without shutting them down for maintenance and upgrades. With a NAS device, storage is not an integral part of the server. Instead, in this storage-centric design, the server still handles all of the processing of data but a NAS device delivers the data to the user. A NAS device can exist anywhere in a LAN and can be made up of multiple networked NAS devices.

Network-attached storage consists of hard disk storage, including RAID, and software for configuring and mapping file locations to the network-attached device. Network-attached storage can be a step toward and included as part of a more sophisticated storage system known as a storage area network (SAN).

Strategic Direction:

- Do not use NAS with Microsoft Exchange, as Microsoft officially does not support NAS with Exchange Server.

TABLE 26. NETWORK ATTACHED STORAGE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> ○ Cisco Content Distribution Manager 4650 • EMC CLARiiON 	<ul style="list-style-type: none"> • Network Appliance NetApps F840, F760 Filer 	

3.1.6 Microform

Microform is a photographic technique for saving image and text data. The most common media types include microfilm, microfiche, and aperture cards.

Strategic Direction:

- Transition to digital format to eliminate microform.

3.1.7 High-Speed Printers

High-speed printers are heavy-duty machines that are designed to produce large volumes of output in a short time. They are particularly well suited for any operation involving mass production of documents of any size.

Strategic Direction:

- For high-volume or recurring output, use Document Automation and Production Service (DAPS)

3.1.8 Automatic Identification Technology

Automatic Identification Technology (AIT) is a family of powerful new technologies for automated data entry, collection and manipulation. AIT provides tools that can reduce administrative and logistics costs in a variety of applications by eliminating errors and speeding the collection and transmission of data. For example, AIT can reduce or eliminate paper records in such fields as inventory control, personnel, medical, dental, payroll and maintenance management. Finally, the proper use of AIT will help to achieve Total Asset Visibility.

Automatic Identification Technology can improve DoD's logistics business processes and enhance warfighting capability by helping logisticians collect information on troops and equipment moving throughout the theater of operations.

AIT encompasses a variety of read and write data storage technologies that capture asset identification information. Those technologies include bar codes, optical memory cards, and radio frequency identification tags.

AIT devices offer a wide range of data storage capacities from a few characters to thousands of bytes. The information on each device can range from a single part number to a self-contained database.

Strategic Direction:

- All acquisition of AIT equipment will be coordinated through the Program Executive Office Standard Army Management Information Systems (PEO STAMIS).

3.1.9 Bar Code

A bar code is an array of parallel, narrow, rectangular bars and spaces that represent a group of characters. Bar codes are applied on labels, paper, plastic, ceramic and metal by a variety of marking techniques. A reader scans the bar code, decodes it, and transfers the data to a host computer. There are two types of bar codes, linear and two-dimensional.

Linear—a linear bar code is normally limited to about 20 characters. Linear bar codes are used to represent a key data element that serves as a point of reference in a central database. Scanning a bar code permits automatic access to the information in the database.

Because of its ability to represent alphanumeric data, the automotive industry and the Department of Defense mandate the use of Code 39 for industrial barcode labels. The Code 39 label format is defined in American National Standards Institute (ANSI) standard MH 10.8M - 1983, UCC-128, and is also known as USD-3 and 3 of 9. This discrete, self-checking, variable length symbology can readily be printed by a variety of technologies.

Two-dimensional—A 2D bar code can store up to 1,850 characters in a single symbol. Two-dimensional bar codes can also sustain considerable damage and still be read. DLA uses bar codes to provide shipping information on multipacks and air pallets, and to convey detailed historical repair data on items in the repair cycle. DoD shipping activities such as storage

facilities, installations, ports and container consolidation points prepare and attach 2D bar codes to multipacks or air pallets that contain several items for one recipient. Those bar codes can contain both transportation and supply data.

With 100 times the information capacity of a traditional linear bar code of the same size, PDF-417 functions as a high-density, high-capacity “portable data file” to provide low-cost access to large amounts of information without referencing an external database. While traditional bar codes, in use as early as 1973, function as “keys” that access external databases, PDF-417 stores the entire data file in the code itself.

PDF-417 serves as a paper-based communications protocol for transferring data between computer systems without keying. The symbology encodes full ASCII, numeric, or binary data; and uses sophisticated error-correction algorithms to keep intact 100 percent of the data even on damaged or poorly printed symbols. PDF-417 is unique in that all existing bar code reading technologies, including both laser and CCD scanners can decode it.

TABLE 27. BAR CODE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Intermec • Symbol Technologies 		

3.1.10 Optical Memory Cards (OMC)

The optical memory card uses the same technology made popular by audio compact discs and audio-visual CD-ROM (read only memory) products. Users write on the card with a narrowly focused, high-intensity laser beam. A low-power light beam reads the “pits” created during the writing process. Because the OMC is about the size of a credit card, a person can carry it easily in a pocket or wallet.

DoD activities use OMCs when extensive, detailed content is required. For instance, DLA’s Automated Manifest System uses a DoD standard OMC for automated receipt processing. The cards contain supply and transportation information used for receipt processing, discrepancy reporting and reconstituting shipment data and documentation. Logistics nodes that consolidate shipments generate the OMCs while receiving activities and support units are the primary users.

DoD has selected an internationally recognized Optical Memory Card (OMC) format, the Drexler European Licensees Association (DELA) format provided in Annex B of the ISO/IEC 11694. This is now the only recognized DoD standard for writing and reading data on OMCs for logistics applications. The DoD designated OMC standard is in the public domain and recognized by ANSI, ISO, and IEC. Drexler manufactures their OMC product under the trade name “LaserCard”. Any OMC system procured for use in or by DoD should be compatible with “LaserCard”.

TABLE 28. OPTICAL MEMORY CARDS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • LaserCard • Conlux Reader/Writer 		

3.1.11 Radio Frequency Identification

Radio frequency identification is a relatively new approach to identify, categorize and locate people and materiel automatically within a few inches to 300 feet. The technology helps when a user needs to locate and redirect individual containers or needs to know the container's contents.

In active RF tags, the labels are known as tags or transponders. They contain information that can range from a permanent ID number programmed into the tag by the manufacturer to a variable 128-kilobyte memory that can be programmed by a controller using RF energy. The controller is usually referred to as a reader or interrogator. An interrogator and a tag use RF energy to communicate with each other. The interrogator sends a RF signal that "wakes up" the tag, and the tag transmits information to the interrogator. The interrogator also can write new information on the tag, thus permitting a user to alter the tag's information within the effective range. Other less capable RF tags—passive tags—operate similarly to active tags except the data capability is limited to 20 bytes and interrogation is generally limited to line-of-sight.

TABLE 29. RF IDENTIFICATION

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> Savi Tag 		

3.2 Transaction Processing

A Distributed Transaction Processing (DTP) capability is an important enabler of distributed client/server computing. DTP systems provide the services required to manage and process distributed transactions in a heterogeneous computing environment. Services provided may include Concurrency control, Failure isolation, Dynamic load balancing, Configuration management, Message queue management, and Two-phase commit

Strategic Direction:

- Select a TP monitor that integrates with the DLA selected message queuing product, hardware platforms, and database management systems.

TABLE 30 TRANSACTION PROCESSING MONITORS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> Transarc Encina 2.5 CICS (UNIX) 	<ul style="list-style-type: none"> CICS (AS/400) Cincom Supra CM Intercomm 	<ul style="list-style-type: none"> Open Link

3.3 Application Development

Application architecture provides structure, interoperability, flexibility, and longevity for the developed applications. Development tools that support industry standards for multiple environments facilitate meeting these objectives.

3.3.1 Modeling

BPR is a management analysis discipline to redesign processes, organizations, and the culture of DoD activities. Functional leaders apply BPR using improvement tools and techniques. The redesign approach can be radical or incremental to achieve dramatic improvements over short periods of time. BPR results in highly streamlined processes by providing for a cross-functional/cross-service integrated analysis of multiple activities or functions that contribute to a shared purpose. It allows users to gain an understanding of the meaning, characteristics, and relationships of data and business processes. Using data modeling, normalization, data naming standards, and data modeling tools, users will create IDEF1x data models. IDEF0 is used to document business processes.

Strategic Direction:

- Build applications and data bases only after business process reengineering is completed.

TABLE 31. MODELING SUPPORT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • CA AllFusion Process Modeler 4.1.4¹⁷ • CA AllFusion ERwin Data Modeler 4.0 • CA AllFusion Model Manager • IBM Rational Rose Enterprise • IBM Rational Analyst Studio 1.5 • Oracle Designer 2.1.2 • CA Advantage Gen • Microsoft Visio 2002 • Telelogic System Architect (Formerly Popkin) • IDS Scheer ARIS Toolset (Formerly ARIS Toolset) 	<ul style="list-style-type: none"> • Sterling Cool: Gen 5.1 • Platinum BPwin 2.5 • Platinum ERwin 3.6 • Platinum ModelMart 3.0 	

3.3.2 Client Builders

Integrated Computer-Aided Software Engineering (I-CASE), code generation, and Fourth Generation Language (4GL) tools support architectural objectives. These tools provide a productivity-enhanced environment in which software applications and data base structures are created in a variety of third and fourth generation languages. They reduce many of the repetitious tasks of building software, reducing error rates and promoting the use of reusable, modular code.

Strategic Direction:

- Maximize the use of web clients and associated technologies in providing robust, open user interface to applications

¹⁷ Computer Associates (CA) bought Platinum.

- Use asynchronous, message-based communication to interface application systems and subsystems
- Use Microsoft Windows GUI as the GUI design standard

The table for 4GL Application Client Builders approved products is on the following page.

TABLE 32. 4GL APPLICATION CLIENT BUILDERS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • CA Advantage Gen • Oracle Developer 6.0 • CA Opal 2.1 • Symantec Visual Café 3.0 • Microsoft Visual Studio 6.0 • Microsoft Visual C# • SAP ABAP Development Workbench • Business Objects Designer • Business Objects Developer • Unify Accell/Web¹⁸ 	<ul style="list-style-type: none"> • Knowledgeware Object View • Sybase Power Builder • Sterling Cool: Gen 5.1 • Cincom Mantis 	<ul style="list-style-type: none"> • Information Builders, Inc. • Focus • Dbench • Sterling Flashpoint

3.3.3 Programming Languages and Code Generators

Programming languages provide a vocabulary and set of grammatical rules for instructing a computer to perform specific tasks. The term *programming language* usually refers to high-level languages, such as BASIC, C, C++, COBOL, FORTRAN, Ada, and Pascal. Each language has a unique set of keywords (words that it understands) and a special syntax for organizing program instructions.

Code generators are a class of tools that allow the user to visually depict the desired outcome, such as a screen design or the flow of a process. The tool then “generates” the programming language code required for a computer to carry out the task.

Strategic Direction:

- Limit the use of COBOL to Online Transaction Processing (OLTP) systems in the Standard Operating Environment (SOE).

The table for approved Programming Languages and Code Generators is on the following page

¹⁸ Approved only for use in conjunction with DAISY system as indicated in Section 6.7.

TABLE 33. PROGRAMMING LANGUAGES AND CODE GENERATORS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • COBOL for VM • COBOL for OS/390 • Microsoft Visual Studio Team Foundation Server • Microsoft Visual Basic .Net • Microsoft Visual C++ 6.0 • Personify Design TeamLook • Borland C++ Builder • IBM APS • IBM Microfocus COBOL • IBM Job Control Language • Any PL/SQL • Any JAVA • Borland J Builder 4 Foundation • Borland J Builder 4 Professional • XSB Prolog 	<ul style="list-style-type: none"> • IBM Rational Apex • OS/VS COBOL • VS COBOL II 	<ul style="list-style-type: none"> • COBOL XT II • Ada II

3.3.4 Application Testing

TABLE 34. APPLICATION TESTING

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Mercury Interactive Loadrunner Client¹⁹ • IBM Rational TestStudio • Tools for Oracle Application Developers (TOAD) Professional 		

3.4 Enterprise Application Integration

3.4.1 Process Management

Workflow management applications typically route documents via an electronic mail message handling system to designated people or applications. Workflow management applications support the movement of a document through the various stages of processing, presentation, and routing. Typical uses include processes such as purchase orders and document routing. These applications are often viewed as the best use of technology that makes business processes more productive. Workflow tools can provide significant productivity gains when used in appropriate situations. Often existing mail systems, groupware tools or electronic forms packages can provide the necessary functionality.

¹⁹ HP bought Mercury in Nov 2006 – product names have not changed

The strategic direction and table of approved process management tools is on the next page.

Strategic Direction:

- Continuously reevaluate workflow as the DLA technical infrastructure changes.

TABLE 35. PROCESS MANAGEMENT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • SAP ABAP Event Definition Editor • SeeBeyond ICAN V5 	<ul style="list-style-type: none"> • Documetrix 2000 • JCALS Workflow • SeeBeyond e*Gate 	<ul style="list-style-type: none"> • Lotus Notes²⁰ • KeyFile / KeyFlow

3.4.2 Data Transport Middleware

DLA has many data sources using various database management packages (i.e., DB2, Oracle, Datacom/DB, Model 204, and Supra). A number of data sources use 'flat file' formats (e.g., neither relational nor object-oriented). This variation of data storage formats has made it difficult for users and systems to access the data (often requiring program development). To make this data available to DLA, DoD, and commercial users, DLA will begin to use Commercial-Off-The-Shelf (COTS) middleware and Web-based technologies to make the data more readily accessible. Using data-access middleware, users will have SQL-driven access to all types of DLA data. Flat file data must be moved to a relational format.

In some cases, data will be replicated to special databases (e.g., data warehouses, data marts, etc.) to meet performance requirements or other special needs. Mapping and scheduling this replication requires the use of a standard middleware solution. Where the timeliness of data is of primary concern, use direct access to source data rather than replicating it. Database access middleware, also referred to as database gateway middleware, resides between the client application and the vendor DBMS or file system. Database access middleware provides the client application and end user with a single method, as well as a view of accessing data in a heterogeneous database environment. The method can vary from APIs to fourth generation languages (4GLs), or to gateways (point-to-point, SQL, or universal).

Considering the DLA's implementation of BSM, supported by SAP et al, Enterprise Application Integration (EAI) solutions should provide seamless support of and simple system integration between existing internal and external applications. Desired solutions would offer powerful yet straightforward installation, deployment, and configuration of connectivity schemas. This should include "codeless" connectivity thus reducing implementation costs and decreasing project failure risks. These qualities promote prompt implementation resulting in a rapid return on investment (ROI).

Strategic Direction:

- Use COTS middleware over GOTS middleware

²⁰ Approved only for use in conjunction with Program Budget Decision System as indicated in Section 6.5.

- Use native data base drivers for homogeneous applications

TABLE 36. DATA TRANSPORT MIDDLEWARE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • IBM MQ Series 5.1 • IBM Data Propagator • SeeBeyond ICAN V5 • Microsoft BizTalk Server 2002 	<ul style="list-style-type: none"> • IBI EDA/SQL V5 • SCUDS V5 • IBI Copy Manager V5 • SeeBeyond e*Gate 	

3.4.3 Data Cleansing / Data Transformation

Data Cleansing, or transformation, is the set of activities that extract data from source systems, perform data quality assurance, format data consistently, compute data derivations and summaries, and prepare the data for loading into the data warehouse or other target data stores. The metadata stores transformation logic for user access and reuse in warehouse operations.

Data transformation tools provide capabilities to use packaged solutions to extract, convert, and import data between systems. The need for data warehousing, Electronic Data Interchange (EDI), and extracting and loading data into packaged software such as Enterprise Resource Planning (ERP) packages has made data transformation a very critical enterprise integration activity. Data transformation tools provide authoring capabilities that allow integrators to quickly develop transformation rules or functions to manipulate, merge, and validate data. The tools then generate routines or use an interpretive engine to process records.

Strategic Direction:

- There is no recommended strategic direction at this time.

TABLE 37. DATA CLEANSING / DATA TRANSFORMATION

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Oracle Pure Integrate 5.3 • Informatica • XCache Technologies • Xcompress 		

3.4.4 Connectors and Adapters

Connectors and adapters bridge the gap between host application experts (who "publish" the legacy components) and new technology experts (who "consume" the legacy components).

Table 38 CONNECTORS AND ADAPTERS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • SeeBeyond ICAN V5 Integrator • SeeBeyond ICAN V5 Intelligent Adapters • Commerce One XML Commerce Connector v1.1 • Commerce One XML Portal Connector version 3.2 • SAP & MQSeries Adapters for Microsoft BizTalk 	<ul style="list-style-type: none"> • SeeBeyond e*Gate Integrator • SeeBeyond e*Way Intelligent Adapters for e*Gate 	

3.5 Data Management

Data is a principal DLA resource that, like other organizational resources, must be managed effectively. A Database Management System (DBMS) is an extremely complex set of software that manage large structured sets of persistent data, offering ad hoc query facilities to many users.

A DBMS controls the organization, storage and retrieval of data (fields, records and files) while controlling the security and integrity of the database. The DBMS accepts requests for data from the application program and instructs the operating system to transfer the appropriate data.

Data management services provide access to data and metadata (data about data) and the methods to manipulate the data. Data management services include local and network file services, data models, repositories, data warehouses, and relational database management products. Data management services provide applications with access to structured data in a distributed environment.

3.5.1 Relational Database

A relational database allows the definition of data structures, storage and retrieval operations and integrity constraints. In such a database the data and relations between them are organized in tables. A table is a collection of records and each record in a table contains the same fields. Certain fields may be designated as keys, which mean searches for specific values of that field will use indexing to speed them up.

The ANSI SQL-2 is the primary standard for Relational DBMSs. The SQL Remote Data Access (RDA) standard extends this interface to access databases over a network.

Strategic Direction:

- Separate the data for On-line Transaction Processing (OLTP) applications from On-line Analytical Processing (OLAP) applications
- Design and administer data so that it can be managed in a distributed environment
- Data management will improve the understanding and use of corporate information through consistent definitions of data and standardized naming conventions, consistent with the DoD 8320.1 series

TABLE 39 RELATIONAL DATABASE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Oracle 8/8i – 10g ²¹ • Microsoft SQL Server 2005 • Microsoft Access 2003 • IBM DB2 (UNIX) 	<ul style="list-style-type: none"> • Oracle 7.4 and earlier • Microsoft SQL Server 2000 and earlier • Microsoft Access 2002 • Sybase ²² 	<ul style="list-style-type: none"> • CA Datacom/DB ²³ • Informix • Microsoft Access 2000

3.5.2 Object Database

An Object Database is a database management system (DBMS) that supports the modeling and creation of data as objects. This includes some kind of support for classes of objects and the inheritance of class properties and methods by subclasses and their objects. There is currently no widely agreed-upon standard for what constitutes an Object Database, and associated products are considered to be still in their infancy.

Strategic Direction:

- While not used in DLA today, the Agency will continue to monitor developments in this area for potential future use.

3.5.3 Data Warehousing

Data warehousing is a process of gathering and organizing information for use in supporting the decision-making process. The result of this process is a data warehouse that contains information pertaining to one or more areas of interest to the end user.

The data warehousing process makes use of multiple methodologies, architectures, and technologies. The primary purpose of data warehousing is to enable decision support applications and knowledge worker activity. Data warehousing can be characterized more as architecture than as a specific technology. A broad range of technologies such as parallel processing, multidimensional databases, and Relational DBMSs serve as building blocks in the construction of a data warehousing architecture.

²¹ Follow the DIS Security Technical Implementation Guide (STIG) as well as the DISA Information Assurance Support Environment - <http://iase.disa.mil/publicnew.html> .

²² Approved only for use in conjunction with Program Budget Decision System as indicated in Section 04.

²³ Approved only for use in conjunction with the Distribution Standard System (DSS) as indicated in Section 6.6.

DLA implementation of a data warehousing strategy should include a corporate data warehouse that feeds data to data marts with strong information delivery capability to leverage their existing data. The data marts are subsets of the corporate data warehouse that are targeted for a specific use. The corporate data warehouse provides a single point at which to integrate and cleanse the extracts from source databases. Once the data has been integrated and cleansed it is distributed to the data marts. This reduces the number of extracts from the OLTP databases and the number of cleansing operations performed. The use of all DLA information rather than a subset also allows for a more thorough cleansing operation.

Strategic Direction:

- The definition and selection of DLA data warehousing solutions shall emphasize prototyping to demonstrate and build internal expertise. Use scaleable technology that can start small, but has the capability to manage large amounts of data in the DLA environment.
- DLA transaction processing (OLTP) should be physically separate from the processing conducted for decision support, executive management, and operational analysis (On-Line Analytical Processing (OLAP)).
- Conduct DLA on-line transaction processing (OLTP) on centralized systems, and distribute decision support (OLAP), executive management support, and operational analysis as required within considerations of security, manageability, response time and reliability.
- The DLA corporate data warehouse approach will build a highly normalized transaction database where standardized (cleansed) data will be maintained. Complementing this “wholesale” data warehouse will be a series of highly de-normalized “retail” data marts that will summarize and restore the highly granular wholesale data in a database design specialized for analytical and decision- support computing.
- DLA will take an enterprise approach to implementing a data warehouse. The implementation should include data marts and not be a monolithic approach.

TABLE 40. DATA WAREHOUSING

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Oracle Warehouse Builder • Oracle Energy Downstream • NCR Teradata 		

3.5.4 Data Access Middleware

Database access middleware, also referred to as database gateway middleware, resides between the client application and the supplier DBMS or file system. Database access middleware provides the client application and end user with a single method and view of accessing data in a heterogeneous database environment. The method can vary from Application Programming Interfaces (APIs) to fourth-generation languages (4GLs) or to gateways (point-to-point, SQL, or universal).

Standard APIs are preferred for applications because APIs are more portable and interoperable. 4GLs and gateways are well suited for end-user access to heterogeneous databases. Point-to-point and SQL gateways tend to support limited databases, but universal gateways support various DBMSs and file systems.

Sun Microsystems’ Java language specification for developing Internet/intranet applications has provided impetus for the development of the Java Database Connectivity (JDBC) API. This API

provides a standard SQL database access interface from a Java application. These JDBC drivers can be categorized as:

- JDBC- Open Database Connectivity (ODBC) bridge — provides JDBC access via most ODBC drivers. Some ODBC binary code and, in many cases, database client code must be loaded on each client machine that uses this driver.
- Native-API, partly Java driver — converts JDBC calls into calls on the client API for Oracle, Sybase, Informix, DB2, and other DBMSs. Like the bridge driver, this style of driver requires that some binary code be loaded on each client machine.
- Net protocol, all-Java driver — translates JDBC calls into a DBMS-independent net protocol, which is then translated into a DBMS protocol by a server. This net server middleware can connect all its Java clients to many different databases. The specific protocol used depends on the vendor. In general, this JDBC alternative is the most flexible.
- Native-protocol, all-Java driver — directly converts JDBC calls into the network protocol used by DBMSs, thus allowing a direct call from the client machine to the DBMS server. Since many of these protocols are proprietary, the database vendors themselves will be the primary source for this style of driver.

Strategic Direction:

- For applications (developed or purchased), use standards-based APIs for database access. When choosing end-user database middleware, consider products that support an SQL or universal gateway.

TABLE 41. DATABASE ACCESS MIDDLEWARE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Mercator • Oracle Transparent Gateways for SQL Server, Informix, Open Ingres, IBM DRDA, Sybase, version 8.1.6 • Oracle Procedural Gateways for APPC, IBM MQSeries and Microsoft Windows NT • Oracle Pure Extract version 6.2 • Sybase Omni Connect 11.5 • Sybase Replication Server 11.5 • IBM Data Propagator 	<ul style="list-style-type: none"> • IBI EDA/SQL 	

3.5.5 Metadata Repository

Metadata is a definition or description of data. It describes how and when and by whom a particular set of data was collected, and how the data is formatted. Metadata is essential for understanding information stored in any database. Metadata Repositories include the DMBS

engine, storage architecture, and methods to access the stored metadata either directly or through a programming tool.

TABLE 42. METADATA REPOSITORY

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Rochade 		

3.5.6 Electronic Business/Electronic Commerce

Electronic Business (EB) / Electronic Commerce (EC) is the comprehensive, end-to-end electronic interchange of information needed to conduct business. EC includes electronic data interchange (EDI), electronic data interchange for administration commerce and transport (EDIFACT), WWW, electronic bulletin boards, electronic funds transfer (EFT), E-mail, messaging, and other technologies.

Strategic Direction:

- Use the latest Federally approved Implementation Conventions.

TABLE 43. ELECTRONIC BUSINESS/ELECTRONIC COMMERCE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • PaperFree • Mercator Commerce Broker • Mercator Design Studio Client • SeeBeyond ICAN V5 Core Products • Microsoft Site Server 3.0 	<ul style="list-style-type: none"> • Sterling Gentran Excel • Information Exchange INX • DEC EDI Server • DEC EDI Filebridge • Harbinger SupplyTech STX • TSI Mercator • SeeBeyond e*Gate Core Products 	

3.5.7 Business Intelligence

Most efforts in the information industry have focused on transmitting data or organizing data into information. Little has been done to help the user navigate through the masses of data, find or create relevant information, and transform data into usable business intelligence.

Data mining uses intelligent extraction and processing techniques. These techniques use advanced technological innovations to help users extract useful information and knowledge from their vast amounts of data. The effectiveness of these techniques depends on the process, the data, and the technical knowledge of the end users. The data mining applications require sophisticated technology plus end-user training.

Data mining's focus is on providing services that enhance the value of existing data. DLA decision-makers can then use this knowledge to make better-informed decisions.

Strategic Direction:

- Conduct data mining and decision support analysis on OLAP data warehouses, not OLTP
- Select data mining tools that conform to emerging open systems standards

TABLE 44. BUSINESS INTELLIGENCE SUITES

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Business Objects ²⁴ • Expert Choice • BrioEnterprise Suite 		

3.5.8 Reports

An enterprise reporting tool is one that allows DLA to gain a better understanding of its operations by putting critical information in the hands of all those who need it – employees, managers, partners, and the public. Enterprise reporting tools generally contain several types of functionality, from generic reporting capabilities (including report design) to robust ad hoc querying and online analytical processing (OLAP) capabilities or business intelligence (BI).

TABLE 45. REPORTS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Cognos Impromptu 6.0 • Oracle Discoverer 3.1 • Oracle 9iAS • Business Objects Crystal Reports 9 & 10 • Business Objects Crystal Enterprise 9 & 10 • Business Objects InfoView • Business Objects Broadcast Agent • Brio Portal 7.0 • Brio Reports • VPS ²⁵ • Canam Report Generator • Canam WebVu • CA Dispatch ²⁶ • Microsoft ActiveSync 3.8 ²⁷ • SAP Business Information Warehouse v2.0 • Informatica Powermart • Platts Powermap 	<ul style="list-style-type: none"> • DLA Unique Products and/or Programs ²⁸ • Cognos Impromptu 5.0 ²⁹ • Seagate Crystal Reports 7.0, 8.0 & 8.5 (as of 7/2003 owned by Business Objects) 	

²⁴ Business Objects is a suite of products which may be segmented as follows: Portal & Broadcasting (InfoView, Infoview Mobile, Broadcast Agent), Query, Reporting & Analysis (WebIntelligence, BusinessObjects, BusinessQuery), Administration (Designer, Supervisor, Auditor), Analytic Applications, Enterprise Deployment (Developer Suite, OLAP Access, RDTs, Personal Trainer)

²⁵ Approved only for use in conjunction with the Distribution Standard System (DSS) as indicated in Section 6.6.

²⁶ Approved only for use in conjunction with the Distribution Standard System (DSS) as indicated in Section 6.6.

²⁷ Approved only for use in conjunction with the Defense Property Accountability System (DPAS) program as indicated in Section 6.10.

²⁸ Approved only for use in conjunction with the Distribution Standard System (DSS) as indicated in Section 6.6.

²⁹ Approved only for use in conjunction with the Distribution Standard System (DSS) as indicated in Section 6.6.

3.5.9 On Line Analytical Processing

Online Analytical Processing (OLAP), a category of software tools that provides analysis of data stored in a database. OLAP tools enable users to analyze different dimensions of multidimensional data. For example, it provides time series and trend analysis views. The chief component of OLAP is the OLAP server, which sits between a client and a database management system (DBMS). The OLAP server understands how data is organized in the database and has special functions analyzing the data.

OLAP enables analysts, managers and executives to perform ad hoc (or "spontaneous") data access and analysis based on its dimensionality. This form of multidimensional analysis provides business insight through fast, consistent, interactive access to a wide variety of possible views of information.

TABLE 46. ON LINE ANALYTICAL PROCESSING

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Cognos Powerplay 6.5 • Oracle Express 6.3.2 • Networks Oneview OLAP • Business Objects WebIntelligence • Business Objects BusinessQuery • Business Objects OLAP Access Server • Brio Intelligence • Hyperion Essbase 		

3.5.10 Data Mining

Data mining is sorting through data to identify patterns and establish relationships. Data mining parameters include: association, sequence or path analysis, classification, clustering, or forecasting.

- Association - looking for patterns where one event is connected to another event
- Sequence or path analysis - looking for patterns where one event leads to another later event
- Classification - looking for new patterns (May result in a change in the way the data is organized but that's ok)
- Clustering - finding and visually documenting groups of facts not previously known
- Forecasting - discovering patterns in data that can lead to reasonable predictions about the future (This area of data mining is known as predictive analytics.)

TABLE 47. DATA MINING

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Oracle Darwin version 3.7 • MapInfo Professional 		

3.5.11 Statistical Analysis

Statistical Analysis Statistical analysis refers to a collection of methods used to process large amounts of data and report overall trends.

TABLE 48. STATISTICAL ANALYSIS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • SAS Version 7.0 • SPSS 10.0 for Windows • Global Insight Cost Analyzer ³⁰ • PRICE-H ³¹ 	DRI-Wefa Cost Analyzer	

3.5.12 High Volume Business Rules Derivation and Processing

Business rules are used in many aspects of IT Solutions. They form fundamental building blocks in structured logic, commonly represented in the form “IF condition THEN perform_actions”. Business rules can be stored in static form as coding or in dynamic form as data or in various hybrid forms. A business rules editor is the coding needed to maintain a set of business rules in dynamic form or hybrid form. Among other services, a business rules editor relates the codes in the dynamic business rules to their meanings in words or diagrams. A business rules engine is the coding needed to apply a specified set of business rules built using a business rules editor. Predictive analysis on enterprise data includes powerful techniques to automate business rules derivation.

Low and moderate volumes of relatively static business rules are adequately supported by other data management solutions. A few applications need more automation than the others because of high volatility issues resulting from high volume derivation needs and high volume processing needs. High volume here means hundreds or thousands of business rules in the set and dozens changing per month. When high volatility is involved, then (1) the expected result includes a set of dynamic business rules stored in relational DBMS tables; (2) the Rete algorithm is an industry best practice for optimizing the business rules engine; (3) predictive analysis is an industry best practice for optimizing the business rules derivation; (4) integration of the business rules derivation, the business rules editor and the business rules engine is required for adequate results; (5) being able to trace which business rules triggered the specific actions to perform is critical when validating edits to the business rules; (6) the users require simplified methods for doing “what if” analyses and for resolving incomplete or conflicting rule sets.

Predictive analysis leverages an organization's business knowledge by applying sophisticated analysis techniques to enterprise data to assist in optimizing business processes. These techniques generate models for classification, pattern recognition, trend forecasting, sequence and

³⁰ Used by the three ICPs for historical and projected costs in commodity buys

³¹ Price reasonableness estimator for received quotes

association detection, anomaly identification, and, as noted above, business rule derivations. By measuring uncertainty, predictive analysis enables proactive risk management, and the refinement of key decision making processes through controlled, iterative testing of potential actions and any associated consequences.

Strategic Direction:

- Select a package that can be integrated with both current and future business processes

TABLE 49. HIGH VOLUME BUSINESS RULES DERIVATION AND PROCESSING

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Computer Associates Cleverpath Predictive Analysis Server • Computer Associates Cleverpath Aion Business Rules Expert 		

3.6 Business Applications

For mission-critical legacy systems, particularly the materiel management systems used to provide sustained support of spares and consumables, food, medical, and clothing items, DLA's approach is based on evaluating and selecting Commercial-off-the-shelf (COTS) software packages for enterprise resource planning and supply chain management. The end objective is not to radically customize the software, or develop Government-off-the-shelf (GOTS) software, as we have in the past.

Strategic Direction:

- Maximize the use of COTS for business applications
- Ensure selected applications reflect best commercial practices

3.6.1 Enterprise Resource Planning

Enterprise Resource Planning (ERP) is an industry term for the broad set of activities supported by multi-module application software. ERP systems help a manufacturer or other business manage the important parts of its business, including product planning, parts purchasing, maintaining inventories, interacting with suppliers, providing customer service, and tracking orders. ERP can also include application modules for the finance and human resources aspects of a business. Typically, an ERP system uses or is integrated with a relational database system. The deployment of an ERP system can involve considerable business process analysis, employee retraining, and new work procedures.

TABLE 50. ENTERPRISE RESOURCE PLANNING

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • SAP R/3 Version 4.6 • SAP Strategic Enterprise Management • SAP GUI 4.6D Client • Control-M Option for SAP • Patrol Knowledge Module for Control-M • HP MC/Serviceguard Extension for SAP • SeeBeyond ICAN V5 Business Process Manager • SeeBeyond ICAN V5 Integrator • Patrol Enterprise Manager • SeeBeyond Collaboration Rules Editor • SeeBeyond Event Definition Editor • SeeBeyond eExchange Partner Manager 	<ul style="list-style-type: none"> • SeeBeyond e*Insight Business Process Manager • SeeBeyond e*Gate Integrator • SeeBeyond Collaboration Rules Editor • SeeBeyond Event Definition Editor • SeeBeyond eExchange Partner Manager 	

3.6.2 Supply Chain Management

Supply Chain Management (SCM) is the discipline of managing enterprise information flow and products from suppliers to customers. SCM software must coordinate the revision of plans and schedules across supply chain functions. The agility with which the supply chain is managed will ultimately determine the efficient, coordinated achievement of enterprise goals. Effective management at the tactical and operational levels will enable timely dissemination of information, accurate coordination of decisions and actions among people and systems.

Strategic Direction:

DLA will implement a COTS SCM system in conjunction with the core ERP system to provide enhanced functionality for demand tracking, forecasting, and item management.

The Table of approved SCM products is on the following page.

TABLE 51. SUPPLY CHAIN MANAGEMENT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • SAP Advanced Planner and Optimizer Version 2.0 • Commerce One Enterprise Edition Buysite Version 6.5 • SAP Business to Business Procurement/Customer Relationship Management (CRM) • SAP Mobile Sales version 2.0 • Manugistics Networks Demand version 6.1 • Manugistics Networks Scheduling Strategy version 6.1 • Manugistics Networks Supply version 6.1 • Manugistics Networks Oneview Olap version 6.1 • Manugistics Client 6.1.2 • Rockwell Software Arena 		

3.6.3 Product Data Management (PDM)

Product Data Management (PDM) is a rapidly evolving technology and PDM systems support the entire product life cycle - from initial concept to product obsolescence. PDM technology is forging new standards, as well as being directly affected by the creation and evolution of existing industry standards. (PDMIC, 2002)

Basically PDM supports **three categories** of functionality:

- ***Lifecycle product documentation***: “the systematic planning, management, and control of all the engineering data required to adequately document a product from its inception, development, test, and manufacture, through to its ultimate demise” (McIntosh, 1995).
- ***Access and control mechanisms***: “organize, access and control product data, and manage the lifecycle of that data to meet business unit objectives” (Brett, 1994).
- ***Engineering support***: “systems to help engineers manage both data describing products and the process of developing products” (CIMdata).

PDM Solutions should seek to:

- Abruptly adjust to business requirement changes
- Proactively provide partners with new requirements
- Collaborate confidently and securely via the Internet
- Leverage existing operations by integrating new technologies and solutions

Strategic Direction:

- Provide a standard language basis for universal access to product data describing defense material in a mixed government-contractor repository environment.
- Product Data Markup Language (PDML) is an eXtensible Markup Language (XML) for the exchange of product data among COTS Product Data Management (PDM) systems and between PDM systems and government legacy product data repositories.

TABLE 52. PRODUCT DATA MANAGEMENT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • MatrixOne eMatrix 	<ul style="list-style-type: none"> • Bidset Management Tracking and Workflow (BMTW)³² 	

3.6.4 Distribution Planning and Management

DLA conducted extensive marketing research and analysis of alternatives in targeting a Commercial Off the shelf (COTS) software solution. The use of a third party system integrator who is thoroughly knowledgeable of the COTS and its use and configuration is intended to reduce the performance and cost risk associated with the acquisition and integration of the Distribution Planning & Management System (DPMS) COTS. DLA requirements dictate that the DPMS COTS solution must utilize software presently found in the DLA Enterprise Architecture. For this reason the COTS product required for use, as part of the DPMS systems integration, is Manugistics software products.

TABLE 53. DISTRIBUTION PLANNING AND MANAGEMENT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Manugistics Networks Transport 7.1.0.1 • Manugistics Networks Carrier 7.1.0.1 • Manugistics Delivery Manager 7.1 • Manugistics Networks Monitor 7.1 • Manugistics Networks Visibility 7.1 • Manugistics Web Connect 7.0 		

3.6.5 Lean Six Sigma:

Six Sigma is a business strategy consisting of process, organization and technical changes or improvements to increase customer satisfaction, operational efficiencies and revenue thus impacting shareholder value. Six Sigma provides companies with a series of interventions and statistical tools that can lead to breakthrough profitability and quantum gains in quality. Six Sigma goes beyond defect reduction to emphasize business process improvement in general,

³² Per direction from the J6R IT Investment Meeting (Feb 28, 2006) BMTW will be added to the IT Solutions document with the caveat that it will be phased out with the PDMI deployment

which includes cost reduction, cycle-time improvement, increased customer satisfaction and any other metric important to the company.

TABLE 54. LEAN SIX SIGMA

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Minitab, by Minitab ³³ • iGrafx Process for Six Sigma ³⁴ 	Sigmazone SPC XL 2000	

3.6.6 Business System Modernization (BSM) Development Environment

The following products are approved only for the Business System Modernization development environment:

TABLE 55. BSM DEVELOPMENT ENVIRONMENT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Method Delivery Manager Document Repository (a collection of Lotus Notes) • SAP ABAP/4 Developers Workbench • Clipper and Composer • SAP Loadrunner Load/Stress Testing • Mercury Interactive LoadRunner Controller ³⁵ • Mercury Interactive SAP R3 Loadrunner, Virtual User and Web User • SAP CATT Testing Aid • Mercury Interactive Integrated Development Environment • Arena Business Process Simulator • Harvest Change Control • Adobe Captivate ³⁶ 		

³³ MiniTab is integrated into the NAVSEA Lean Six Sigma curriculum that DLA is currently using and the Department of the Navy is pursuing an Enterprise License for the DoD.

³⁴ iGrafx is used in the LSS Define, Measure, Analyze, Improve, Control (DMAIC) phase to map a process and to perform the statistical analysis to demonstrate quality improvements in the process

³⁵ HP bought Mercury in Nov 2006 – product names have not changed

³⁶ Used by the BSM KT&T personnel to create training materials as well as the he DLA Training Center (DTC) instructors delivering BSM training to the workforce.

3.6.7 Geographic Information Systems (GIS)

Geographic Information System (GIS) is a computer technology that combines geographic data (ex: locations of manmade and natural features on the earth's surface) and other types of information (ex: names, classifications, addresses, and so forth) to generate visual maps and reports. A GIS uses geographic locations to relate disparate data and provides a systematic way to collect and manage location-based information.

A GIS centrally stores information about the world in a collection of map layers. These map layers may be overlaid and linked together to create maps, integrate information, visualize and compare scenarios, solve problems, and more effectively manage resources.

Strategic Direction: use GIS for the location, identification, and ordering of maps, charts and other geospatial data to plan and execute missions, ensure safe navigation in waterways, and support intelligence and logistics requirements.

Google Earth is for use by J6E personnel who make frequent trips to Middle East and Africa, where detailed maps from other online services aren't available. Installation/implementation must comply with the DoD requirements for shareware and mobile code use – or the J6E Information Assurance Managers must develop a plan to mitigate any risks.

TABLE 56. GEOGRAPIC INFORMATION SYSTEM (GIS)

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • ESRI ArcGIS ³⁷ • Google Earth ³⁸ 		

³⁷ Under DLA General Order 11-98, DLA assumed the map catalog function from the National Imagery and Mapping Agency; DLIS performs this function for DLA and the Richmond Map Facility (RMF), at the Defense Supply Center Richmond maintains ArcGIS. ArcGIS is on both the NIPRnet and SIPRnet

³⁸ For use in SWA where short-notice TDY and short non-TDY trips for personnel either traveling to the Middle East and Africa, or already stationed in those locations is frequent. RMF is designed for military mission planning, not for the typical TDY, also the RMF online maps are restricted from general distribution.

4. Corporate Infrastructure

Infrastructure solutions represent the “utility” services that bind DLA, the DoD, and the global telecommunications infrastructure together. Infrastructure solutions provide standard distribution facilities and services as in a power grid. Normally procured and managed at the corporate level, the focus of infrastructure solutions is interoperability at all levels within DLA and between DLA and its global partners.

4.1 Information Assurance

Information Assurance investigates security vulnerabilities in distributed information systems and develops architectures, systems and techniques for providing protection from attack, and exploitation. It includes operations that protect and defend information and information systems to ensure their availability, integrity, authentication, confidentiality, and non-repudiation. This includes providing for restoration of information systems by incorporating protection, detection, and reaction capabilities.

4.1.1 Virtual Private Network

A virtual private network (VPN) is a private data network that makes use of the public telecommunication infrastructure, maintaining privacy through the use of a tunneling protocol and security procedures. A virtual private network can be contrasted with a system of owned or leased lines that can only be used by one organization. Using a virtual private network involves encrypting data before sending it through the public network and decrypting it at the receiving end. An additional level of security involves encrypting not only the data but also the originating and receiving network addresses.

TABLE 57. VIRTUAL PRIVATE NETWORK

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Juniper Neoteris • Symantec ISAKMP • Checkpoint VPN-1 family • RSA Keon Client ³⁹ 	<ul style="list-style-type: none"> • Axent Raptor Mobile 	<ul style="list-style-type: none"> • IPSEC • Aventail Remote Access Appliance ⁴⁰

4.1.2 Access Control

A combination of physical security and logical methods and procedures control access to data and applications. Logical access control mechanisms permit access to a machine, a file, or an application only after the client (e.g., employee, machine, application) establishes its identity. Typically there are several layers of access control— e.g., physical control for access to a machine, password control for access to an account, authorization lists for access to individual applications. In the n-tier client/server computing environment, every tier should include access controls.

³⁹ EMC bought RSA in September 2006 product name was not changed

⁴⁰ Aventail is not Common Access Card (CAC) enabled; must use Juniper Neoteris

If the security system is to remain practical, it is important that users have a robust single sign-on procedure. This is accomplished by sharing authentication management information (who you are) and entitlement management data (what you are allowed to access) across multiple applications, network access devices, platforms and even across multiple Internet domains. These solutions prevent security concerns from sources both internal and external to the enterprise. Users should identify themselves only once during a typical work session. This is best accomplished via an enterprise-class user access management solution.

Enterprise-class manageability reduces administration costs while providing broad platform support for heterogeneous environments like the DLA's. Solutions should seek to leverage existing technology investments by supporting leading infrastructure components -- directories, Web servers, application servers, platforms, and authentication methods. Eliminated would be the need to build proprietary user directories and access control systems into each individual application, a functionality which greatly reduces administration costs and complexities.

Identity is usually established by having users provide information that only they are supposed to know. Users might be asked to produce a physical token that only they should possess. An example of the former is a password. An example of the latter is a smart card.

User profiles characterize users. These profiles contain sufficient information to determine which files and which applications each user is permitted to access. Access control lists (authorization lists) can be lists of individual entities or descriptions of profiles. For example, authorization should be based in part upon the roles users have within the DLA organization or within the application (this is an attribute of the user profile).

Strategic Direction:

- Passwords will not be used as the primary access control mechanism
- Implement Access Control at multiple levels: machine access, account access, and application access
- Implement a single sign-on procedure
- Install firewalls to channel all network traffic through closely managed communication links and monitor those links for suspicious activity
- Maintain all authentication and account data in a way that allows authorized users to login from any location
- Provide the capability for users to review their account activity

TABLE 58. ACCESS CONTROL

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • DoD PKI Certificates • Fortezza + • RSA SecureID ⁴¹ • RSA Access Manager, formerly known as RSA Cleartrust • RSA Keon Advanced PKI • Netegrity SiteMinder 5.0 • Oracle Advanced Security Option 		

⁴¹ RSA became the Security Division of EMC in September 2006

4.1.3 Smart Cards

Authentication is the exchange of security information in order to verify the claimed identity of a communications partner. In the context of security, it is used in particular to counter attempts to masquerade as an authorized subject or object in order to establish new connections or associations.

Authentication mechanisms must ensure that every subject or object using the system is identified, that no mechanisms exist to by-pass identification, and that all subsequent actions of the subject or object can be properly attributed to that subject or object. In particular, subject identification must be enforced for both login sessions established through connected devices, such as terminals or desktop keyboards, and through remote devices, such as network or dial-up connections.

Authentication mechanisms must manage some form of data that authenticates each subject or object of the system. The usual form for a subject is the password. Other authentication approaches such as smart tokens may also be used. One form of smart token is the smart card, a small electronic device about the size of a credit card that contains electronic memory, and possibly an embedded integrated circuit. To use a smart card, either to pull information from it or add data to it, you need a smart card reader, a small device into which you insert the smart card. A piece of software, allowing computer to read information from the Smart Card, is called middleware. Middleware also verifies user by proper Personal Identification Number (PIN) and authenticates user for system access.

TABLE 59. SMART CARDS AND MIDDLEWARE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • DoD Common Access Card (CAC) • Fortezza • Active Card Gold 		

4.1.4 Virus Protection

Many forms of computer information can contain harmful content including viruses, macro viruses, Trojan horse programs, etc. These “malicious programs” can be transmitted across a network in a number of ways including SMTP E-mail attachments, FTP file download, and Java applets. Incoming data can be checked for harmful content at the public internet network boundary.

Numerous COTS products exist that can perform this type of content security checking. These products can be integrated with a network firewall system. Two such products, Norton and McAfee, are available on the DoD wide virus detection tool site license (see DISA Web sites for software download - <http://www.ditco.disa.mil/asp/ncr/dodav97.asp> or <http://www.assist.mil>)

In addition to the malicious introduction of viruses into our environment by intentional actions, the opportunities for inadvertent virus incidents will increase, as the Internet becomes an integral element in the DLA IRM strategy. Passive virus protection should be present throughout the DLA LAN structures, including both the origination and reception of messages. Numerous

commercial products exist to provide this type of support in a variety of network environments. Products chosen for DLA must provide protection against the widest possible array of viruses, and must be compatible with the planned DLA LAN architectures.

Numerous commercial products exist to provide virus protection in a LAN and PC environment.

Strategic Direction:

- DoD has an enterprise-level contract that covers all users within DoD. Use of any other products must be justified by the impact to the business.
- Implement current version of virus protection software on all computing platforms
- Isolate instances of viruses as quickly as possible to prevent further propagation
- Identify viruses at the point of entry into the DLA environment rather than at the point of infection

TABLE 60. VIRUS PROTECTION

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Symantec Anti-Virus 8 • Network Associates McAfee Anti-Virus • Microsoft Antigen ⁴² 	<ul style="list-style-type: none"> • CA InocuLAN • Trend Micro ScanMail • Sophus • Symantec Norton Anti-Virus 7.5 and earlier 	<ul style="list-style-type: none"> • EliaShim ViruSafe • Norman

4.1.5 Intrusion Detection

Firewalls will reduce but not entirely eliminate the risk of unauthorized external access to DLA networks and systems. Intrusion detection systems, the digital equivalent of burglar alarms, should be made a part of DLA's infrastructure. The alarm messages they produce should be linked into the systems management environment.

To minimize losses due to security breaches, a detailed plan should be in place for responding quickly to incidents. On a regular basis, but especially following a detected security breach, computer systems should be scanned for viruses, altered data, or altered programs. Following a security breach, all software and data should be compared to copies from back-up tapes in an effort to detect tampering.

TABLE 61. INTRUSION DETECTION

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • ISS RealSecure • ISS Proventia A & G Appliances, which run RealSecure • NIDS/JIDS14 ⁴³ 		<ul style="list-style-type: none"> • Network Associates. Cyber Cop 5.5 ⁴⁴

⁴² Microsoft bought Sybari and the product was renamed Microsoft Antigen

⁴³ Network Intrusion Detection System developed by DOE.

⁴⁴ Network Associates Inc (NAI) stopped development of CyberCop in July 2002; Internet Security Systems (ISS) and NAI offered a special migration program for CyberCop to ISS Internet Scanner

4.1.6 Firewalls

Because DLA will have connections to unsecured networks (e.g., the Internet), special measures must be taken to isolate sensitive data on machines controlled by DLA from unauthorized access. Physical security and on-site access control are not adequate protection. A firewall should be installed to separate trusted networks from untrusted networks. A *firewall* is a combination of hardware and software designed to prevent unauthorized access from an “untrusted” network. The actual mechanism varies widely, but in principle, there are three basic types of firewalls: packet-level filter, stateful packet filter, and application-level gateway. All connections to untrusted networks must be routed through the firewall.

Strategic Direction:

- DLA will control all points of access to DLA’s networks. All external connections to DLA’s networks are corporate level concerns. Standard firewalls must be placed at all such entry points.
- Centers should have a common firewall strategy across all of their activities.

TABLE 62. FIREWALLS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Checkpoint Firewall-1 • Cisco Firewall Feature Set • Check Point firewall-1 NGX R60⁴⁵ • Check Point VPN-1 Pro NGX R60⁴⁶ • Checkpoint VPN-1 Secure Server • Checkpoint VPN-1 Secure Client • Nokia IP 650 Security Appliance⁴⁷ 	<ul style="list-style-type: none"> • Secure Computing Sidewinder Security Server • Axent Raptor Firewall 6.0 • Cryptek Secure Communication 	

4.1.7 Public Key Infrastructure

Public Key Infrastructure (PKI) enables users of a basically unsecured public network such as the Internet to securely and privately exchange data and money through the use of a public and a private cryptographic key pair that is obtained and shared through a trusted authority. The public key infrastructure provides for digital certificates that can identify individuals or organizations and directory services that can store and, when necessary, revoke them. Although the components of a PKI are generally understood, a number of different vendor approaches and services are emerging.

The table of approved Public Key Infrastructure products is on the next page.

⁴⁵ Check Point Firewall-1 NGX R60 and Check Point VPN Pro NGX R60 must be the same version

⁴⁶ Check Point VPN-1 Pro NGX R60 and Check Point Firewall-1 NGX NGX R60 must be the same version

⁴⁷ For all Nokia devices: If Solaris 10 is used as the OS for a firewall it will have to be properly hardened and patched; NOTE - CERT has not put out guidance on Solaris 10 yet, therefore follow the concepts from the Solaris 9 document.

TABLE 63. PUBLIC KEY INFRASTRUCTURE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Microsoft Certificate Server • Netscape Certificate Server • CommerceQuest ProtectMQ • Tumbleweed Online Certificate Status Protocol Validation Authority (OCSP) 4.7 • Tumbleweed VA Responder • Tumbleweed VA Repeater • Tumbleweed Standard Desktop Validators • Tumbleweed Enterprise Desktop Validators • Tumbleweed Web Server Validators • SafeNet Luna SA • SafeNet Luna CA3 		

4.1.8 Encryption

Encryption is the conversion of data into a form that cannot be easily understood by unauthorized people. **Decryption** is the process of converting encrypted data back into its original form, so it can be understood.

TABLE 64. ENCRYPTION

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • RSA BSAFE⁴⁸ • Verisign Secure Server • Information Security Corporation Secret Agent 	<ul style="list-style-type: none"> • Pretty Good Privacy 	<ul style="list-style-type: none"> • UNIX crypt

4.2 Information Services

As defined by the International Telecommunications Union (ITU) software consists of the computer programs, procedures, rules and any associated documentation concerned with the operation of a system.

4.2.1 Messaging/E-mail

Electronic mail (E-mail) message handling systems (MHS) are integral to enterprise computing strategies. E-mail implementation for DLA must conform to both the Simple Mail Transfer Protocol (SMTP) and to the international E-mail messaging (X.400) for compliance with DMS.

⁴⁸ EMC bought RSA in September 2006 – product name was not changed

The E-mail implementation strategy must also maintain enterprise connectivity of dissimilar E-mail message handling systems until they can be migrated to a common standard.

Strategic Direction:

- Implement a global E-mail capability to provide for better Information Assurance (IA) capability, improved reliability, and lower total cost of ownership. Global E-mail entails a three-phased approach: remote administration, site consolidation, and regionalization.
 - **Remote administration** permits select team members to remotely manage DLA's worldwide E-mail systems.
 - **Site consolidation** allows for better utilization of scarce IT staff resources while reutilizing staff into core business areas.
 - **Regionalization** reduces IT costs by cutting the number of required servers, lowering maintenance costs, and standardizing operations.
- Install MIME, UUENCODE, and UUECODE decoders at all DLA E-mail gateways
- Connect existing electronic mail message handling systems to a SMTP/X.400 gateway to access networks outside the Agency
- Deploy a corporate email system to all DLA employees, with common directory in accordance with approved DLA naming conventions
- Unix workstations will connect to the corporate E-mail servers using POP3

TABLE 65. MESSAGING AND E-MAIL

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Microsoft Outlook 2003 • Microsoft Exchange 2003 	<ul style="list-style-type: none"> • Microsoft Outlook 2002 • Microsoft Outlook 2000 • Microsoft Exchange 2000 • Telemon Telalert Complete 	<ul style="list-style-type: none"> • Lotus Notes Mail⁴⁹ • Lotus cc:Mail • Microsoft Exchange 5.5 • Microsoft Outlook 97/98 • Netscape Mail

4.2.2 Records Management

All Federal agencies are required to preserve records and documentation of their organization, function, policies, decision, procedures, and essential transactions. Records management policies address the management of Agency records throughout their lifecycle (i.e., creation, storage, disposal or archival) to facilitate the accomplishment of Agency programs, to promote information access, and to preserve official Agency records in accordance with statutory and regulatory requirements. Records are broadly defined by statute and regulation to include all recorded information, regardless of medium or format, made or received by DLA and its agents under Federal law or in connection with the transaction of public business. Records are appropriate for preservation because of their administrative, legal, fiscal, or informational value.

Strategic Direction:

- Manage the Agencies records as an information resource
- Ensure the preservation or appropriate disposal/archival of relevant Agency records
- Ensure Agency compliance with Federal statutes and regulations regarding records management
- Use PDF format for storage and archiving

⁴⁹ Approved only for use in conjunction with Program Budget Decision System as indicated in Section 6.5.

- When managing records in an electronic environment use only DoD certified COTS records management applications.
- Any product purchased for records management must be a DoD certified electronic records management application. The website for the list of approved products is <http://jtc.fhu.disa.mil/recmgt/register.html>. Any product purchased for records management must be one of these, as they are DoD-certified as meeting the minimum requirements of law.

4.2.3 Document Management

All disciplines in today's working environment are experiencing a migration from paper to digital processes and the change from paper to digital documents is at the heart of this transformation. The Document Automation & Production Service (DAPS) Electronic Document Management (EDM) entails creation, workflow, storage, management and regulatory control, coordinated distribution, and ad hoc output on demand. The exact scope of EDM varies depending on the needs of the user and the organization. The breadth of capabilities of most EDM solutions is such that they are structured to accommodate the numerous requirements typically identified within an organization. EDM solutions integrate processes, people, and technology to optimize and automate historically paper-based processes as a fundamental component of processes and organizations. Records Management is often an embedded feature of EDM solutions. Workflow is an inherent feature in EDM solutions.

Strategic Direction:

- Securely and effectively administer a coordinated migration toward Agency business processes using electronic documents.
- Choose products that conform to applicable standards and accommodate various levels of customer's requirements. Applicable standards include:
 - DOD Directive 5015.2: (2000) Department of Defense Records Management Program, provides implementing and procedural guidance on the management of records in the Department of Defense. This Standard sets forth mandatory baseline functional requirements for Records Management Application (RMA) software used by DOD Components in the implementation of their records management programs; defines required system interfaces and search criteria to be supported by the RMAs; and describes the minimum records management requirements that must be met, based on current National Archives and Records Administration (NARA) regulations.
 - Privacy Act of 1974: 5 U.S.C. § 552a (2000), which has been in effect since September 27, 1975, can generally be characterized as an omnibus "code of fair information practices" that attempts to regulate the collection, maintenance, use, and dissemination of personal information by federal executive branch agencies.

In addition to standards on document structures and data formats, there are a number of federal regulations issued in the last few years that address information assurance, governance, finance, privacy, homeland security, and other issues emerging in today's computer and internet-based environment. The Association for Information and Image Management (AIIM) is a leading international organization in EDM and is a resource to understand regulatory issues.

The DAPS EDM Program Office has devised a strategy involving the use of a finite number of commercial EDM product offerings that provide a comprehensive range of capability and customization. These products provide the basis for the DAPS core EDM service. The range of functionality of these products includes basic entry-level solutions (dtSearch, Search Express), all-inclusive solutions (IBM Content Manager Suite and Hummingbird) to large customized solutions (based on Integic's ePower).

TABLE 66. ELECTRONIC DOCUMENT MANAGEMENT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • dtSearch • SearchExpress • IBM Content Manager • Hummingbird • Integic ePower • PWC Teammate⁵⁰ 		

4.2.4 Groupware

Group-based activities generally involve collaboration on products or issues, messaging among members of the group, control/tracking of project elements and tasks, maintaining a common knowledge repository to organize and share information, information publishing, and group meetings. Groupware applications can include file sharing, information publishing, document management, knowledge management, group scheduling, discussion databases, project coordination, real-time collaboration, ad hoc workflow.

4.2.5 Group Scheduling

Group scheduling tools refer to programs that help people share their personal schedules while located remotely from each other. These tools may provide the capability to search for an individual's available time to support meetings and other events. They also provide the ability to notify individuals of upcoming events for which they have been scheduled.

TABLE 67. GROUP SCHEDULING

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Microsoft Outlook 2003 	<ul style="list-style-type: none"> • Microsoft Outlook 2002 • Microsoft Outlook 2000 	<ul style="list-style-type: none"> • Microsoft Outlook 1997

4.2.6 Electronic Meeting Support

Electronic meeting support includes a suite of team-based, decision support software tools to support activities such as strategic planning, TQM, business process reengineering, and innovative problem solving. They support these needs with sophisticated tools for managing group processes such as brainstorming, information gathering, voting, organizing, prioritizing, and consensus building.

⁵⁰ Only to be used by DLA Auditors

TABLE 68. ELECTRONIC MEETING SUPPORT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Ventana GroupSystems 2.1 • Microsoft NetMeeting 3.01 		

4.2.7 Collaboration Server Software

Collaboration software helps people to work together as a coordinated team. Groupware services can include the sharing of calendars, collective writing, versioning, E-mail handling, shared database access, electronic meetings, and threaded discussions. These products are evolving from proprietary clients to Internet-based architectures.

TABLE 69. COLLABORATION SERVER

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Netscape Collabra 3.54 • Manugistics Networks Collaborate 	<ul style="list-style-type: none"> • ICHAT 	

4.3 Networks

A system of interconnected information resources, including the hardware and software used to connect them. Networks can interconnect with other networks and contain sub networks. Networks can also be characterized in terms of spatial distance as local area networks (LANs), campus area networks (CANs), and wide area networks (WANs).

A LAN is a network of interconnected workstations sharing the resources of a single processor or server within a relatively small geographic area. Typically, this might be within the area of a single office building. Usually, the server has applications and data storage that are shared in common by multiple workstation users. A local area network may serve as few as four or five users or, in the some cases, may serve several thousand.

In telecommunications, a CAN is designed to support a physically contiguous association of locations such as several adjacent office buildings. Typically, such areas require one or more local area networks and bridging, routing, and aggregation equipment based on situational needs.

A WAN (wide area network) is a geographically dispersed telecommunications network. The term distinguishes a broader telecommunication structure from a local area network or campus area network. Usually, LANs are connected to WANs using intelligent communication devices.

4.3.1 Hardware

Network hardware includes the physical wiring and all of the associated connection devices that are used to interconnect individual desktop computers, servers, peripheral equipment, and communications routing devices. Hardware may also include wireless communications devices.

4.3.2 Media

The physical layer connects end-user devices such as LANs, desktops, PCs, terminals, and telephones. Premise distribution systems provide a common cabling plant to deliver voice, data, and video services.

Strategic Direction:

- Install a common cabling plant, which can be used for integrated data, voice, and video services, in each office location
- Use EIA 568 category 5 Unshielded Twisted Pair (UTP) cable for most office environments where electrical interference is not anticipated
- Use EIA 568 shielded twisted pair (STP) cable for environments with high levels of electromagnetic interference, such as plant and factory floors
- Use wireless communication, as allowed by DLA Information Assurance policies, where no wire plant exists or where users are highly mobile

4.3.3 Backbones and Hubs

A backbone is a set of high-speed communication lines that connect slower speed network segments to other segments, to shared resources, or to wide area networks.

Hubs are used to network computers together (usually over an Ethernet connection). They serve as a common wiring point so that information can flow through one central location to any other computer on the network. Hubs are available in either a modular or fixed configuration option. The fixed configuration, (which consists of a single board with a fixed set of I/O ports), is less expensive than a modular hub but offers no flexibility for changing the interface mix. Where a hub needs to support a variable mixture of Ethernet, Fast Ethernet, FDDI and ATM interfaces, use a modular hub. In installations where a large number of desktops of the same interface type are located, consider use of fixed-configuration hubs to save cost.

Strategic Direction:

- Increase the investment in backbones to better keep pace with the growth in DLA local area requirements
- Consider the use of switches rather than hubs for heavily used network segments
- Transition to Gigabit Ethernet

4.3.4 Routers

Routers interconnect networks using protocol-dependent routing information. Routers create and maintain dynamic routing tables of the destinations they know. They are typically used with protocols that support a network layer.

Strategic Direction:

- Increase the investment in routers to better keep pace with the growth in DLA wide area requirements

TABLE 70. ROUTERS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
• Cisco		• Comten

4.3.5 Wireless LAN - Laptops

A Wireless Local Area Network (WLAN) is generally deployed as an extension to an existing wired network, in order to allow clients to access network resources or the Internet without having to be physically connected to the network via a cable. Wireless networks operate in two distinct modes, infrastructure and ad-hoc. Infrastructure mode is defined as a wireless network employing an access point (AP) to transmit data between clients. Ad-hoc mode does not use infrastructure devices such as an AP, but instead allows clients to directly connect to one another.

WLANs are often referred to by the standard they were developed under by the Institute of Electrical and Electronics Engineer (IEEE), which include the following 802.11 wireless network types - IEEE 802.11g in the 2.4Ghz ISM (Instrumentation, Scientific, Medical) band. Wireless networks are also commonly referred to as WLAN, wireless fidelity (WiFi), wireless network, or "Hot Spot".

Any 802.11-enabled wireless device will be deployed with a personal firewall, intrusion detection software, and virus protection. It is critical that wireless clients be secured, particularly when connected to the wired network. These types of applications will help protect proprietary information stored on the station, and prevent a wireless client device from becoming an easy target for an attacker.

Strategic Direction:

- Follow the DISA wireless guidance <https://iase.disa.mil/wirelessguid>
- Highly recommended that WLAN equipment purchased use modular radios (e.g. PC Card based) in order to provide an easy transition to 802.11g WLAN frequencies and modulation techniques.
- Wireless architectures, devices and systems that are not specifically approved by the Defense Information Systems Network (DISN) Security Accreditation Working Group (DSAWG) will not connect to the Secure IP Router Network (SIPRNet).
- The wireless device will have personal firewall, intrusion prevention system (IPS) and anti-virus software that will be kept up-to-date
- Must purchase and maintain security components to provide the required encryption and wireless LAN intrusion detection/rogue detection of wireless devices.
- Equipment used for unclassified transmission must be Federal Information Processing Standard (FIPS) 140-2 compliant with a NIST (National Institute of Standards) certified cryptographic module.
- Equipment used for transmission of classified data must utilize NSA approved Type 1 encryption.
- Must provide for secure Identification and Authentication mechanisms between components.
- The wireless device will support the following:
 - DoD public key infrastructure (PKI) certificates for user authentication.
 - Device certificates for device authentication.
 - Internet Protocol Version 6 (IPv6).
 - All IEEE 802.11 transmission.

The table for approved Wireless devices is on the following page.

TABLE 71. WIRELESS DEVICES

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • 802.11g • Fortress Technologies Air Fortress • Network Chemistry⁵¹ 	<ul style="list-style-type: none"> • 802.11b 	<ul style="list-style-type: none"> • 802.11a

4.3.6 Network Operating Systems

As described in Section 2, servers provide support, such as file, mail, and print services, in a LAN environment. A server's OS is often known as a Network Operating System (NOS). Network Operating Systems typically manage all activity on the network.

Major considerations for server NOS's are compatibility with client software, network support (at a minimum must support TCP/IP), and server type (applications server, database server, etc.).

Strategic Direction:

- Implement appropriate Internet standards and avoid the use of proprietary alternatives wherever possible.

TABLE 72. NETWORK OPERATING SYSTEMS AND SERVICES

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Microsoft Windows 2003 Server • Microsoft Windows 2003 Advanced Server 	<ul style="list-style-type: none"> • Microsoft Windows 2000 Server • Microsoft Windows 2000 Advanced Server 	<ul style="list-style-type: none"> • Banyan Vines • Novell Netware • 3Com • AppleTalk • Microsoft NT Server 4.0 <p>Note: Microsoft didn't have a Server 98 version.</p>

4.3.7 Domain Name Service

The domain name service (DNS) is the way that Internet domain names are located and translated into Internet Protocol (IP) addresses. A domain name is a meaningful and easy-to-remember "handle" for an Internet address.

Strategic Direction:

- The computer platform used to implement DNS will be dedicated to only the domain name service function
- A single DNS server may support multiple DLA domains

⁵¹ Network Chemistry was approved by the CTO based on J6F product demonstration and testing in Sep 2006

4.3.8 Naming and Directory Services

Naming and directory services are related in the functions they provide, but distinct differences still exist. A naming service locates and retrieves information about an object solely by the name of the object. Directory services are network services that identify all resources on a network and make them accessible to users and applications. This includes resources such as a computer, application, file, electronic mailbox, printer, or router. Information that can be retrieved about a resource varies according to the object and the name or directory service providing the information.

A method exists for combining multiple directories into a single directory view. It provides application-specific agents that synchronize the application directories (E-mail and operating systems) into a standard directory with access via the Lightweight Directory Access Protocol (LDAP). This concept will allow DLA to implement a distributed directory structure that provides Agency-wide access to resources such as E-mail addresses, while maintaining directory entries locally.

The DLA Naming Standards and Conventions document may be found in the J-6 library at <https://hqcnnet.hq.dla.mil/j-6/j-63/awg/docs/APPENDIX%20A%20ADNAMINGDEFINITIONS.HTM>

Strategic Direction:

- DLA will implement a global directory in accordance with established DLA naming conventions
- Use Microsoft Active Directory for the agency directory services.
- Administer or register naming and directory services that require uniqueness across DLA
- Use a directory structure that is a two-tiered model such as defined within Distributed Computing Environment (DCE)
- Conform to the X.500 directory standards for applications that have requirements for a full-function directory service
- Use the agreed to naming conventions from the May 2001 Active Directory Working Group meeting.
- Select a naming system that integrates with a directory (X.500) system for applications that require a naming service
- Adopt the XFN model and Application Program Interfaces (API) as the standards for integration of naming systems with directory systems

TABLE 73. NAMING AND DIRECTORY SERVICES STANDARDS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Microsoft Active Directory Services Interface • Microsoft Active Directory Application Mode (ADAM) • Netscape Directory Server ⁵² 	<ul style="list-style-type: none"> • Netscape iPlanet • Red Hat Directory Server 	<ul style="list-style-type: none"> • Novell NDS

⁵² For use ONLY with IDE – required for MQ Series running on UNIX platform (01/07 CTO)

4.3.9 Terminal Emulation

Terminal emulation is the traditional way for remote PCs to interact with larger multi-user computers such as mainframes and Unix-based mid tier and corporate systems. Terminal emulators should be capable of Unix VT-series and IBM 3270-series emulation.

Strategic Direction:

- Migrate applications using terminal emulation to a web-based graphical user interface

TABLE 74. TERMINAL EMULATION

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Attachmate EXTRA! • Novell Workplace Pro • NetManage View/Now • Netsoft NS-Elite • Hummingbird Connectivity version 7.1 	<ul style="list-style-type: none"> • Netmanage OnNet • QWS 3270 • Frontier Technologies SuperTerm 	

4.3.10 Remote Control

Remote control software allows a user at a local computer to have control of a remote computer. Originally, this software was used to provide access to resources on a remote computer. This allows the user to run applications without having the application software installed on the remote computer. This software can also be used to take control of a computer by operations staff, either to provide instruction or technical support to remote sites.

Remote control software poses several security implications for the DLA network. Because this gives the user complete control of the remote machine, it opens risks to unauthorized use. This essentially creates a back door around a firewall. Even if implemented correctly, remote control software exposes the DLA network to attack.

Strategic Direction:

- Use of this software will be restricted to specifically authorized staff in accordance with DLA Information Assurance policies
- DLA will investigate the use of a single Virtual Private Network to support authorized remote control

TABLE 75. REMOTE CONTROL

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Symantec PC Anywhere version 10.x • Netopia Timbuktu • Microsoft Systems Management Server 2.5 	<ul style="list-style-type: none"> • Microsoft Systems Management Server 2.0 	<ul style="list-style-type: none"> • Symantec PC Anywhere all versions prior to version 10.0

4.3.11 Remote Access

Remote access is the ability to log onto a network when not directly connected to that network. Dial-up connection from desktop, notebook, or handheld computer modems over regular telephone lines is a common method of remote access. Remote access is also possible using a dedicated line between a computer (or a remote local area network) and the DLA network. The difference between remote control and remote access is *remote control* refers to taking control of another computer, where *remote access* means that the remote computer is a full-fledged node on the network.

Because remote access provides open accessibility to DLA's information assets, security is a significant concern. Other issues that affect architectural decisions are information currency and worker mobility. Remote access architectural decisions are also dependent upon other guidance in the DLA IT Architecture.

Strategic Direction:

- Provide secure remote access to DLA information resources as needed
- Do not use remote control software to provide remote access
- Implement Citrix Metaframe through NT Terminal Server and Remote Access Service
- Access from public networks will use Virtual Private Networking (VPN) software

TABLE 76. REMOTE ACCESS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Microsoft Windows 2003 remote access servers • Citrix Metaframe 1.8 • Citrix Client 6.0 • Symantec PC Anywhere version 10.x 	<ul style="list-style-type: none"> • Microsoft Windows Server 2000 	<ul style="list-style-type: none"> • Symantec pcAnywhere, prior to version 10 • Netopia Timbuktu • Microsoft Windows NT Terminal Server Edition 4.0

4.3.12 Exchange Monitoring and Reporting Tools

These tools provide comprehensive reporting for Exchange (mailboxes, distribution lists, message size, etc), security reports, custom report wizard (field selection, filtering, grouping, sorting and formatting), agentless implementation (resides on the server, and uses adaptive use of bandwidth).

The table of approved Exchange Monitoring and Reporting tools is on the next page.

TABLE 77. EXCHANGE MONITORING AND REPORTING

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Quest Messagestats • Surfcontrol SuperScout • Shavlik HFNetChkPro • Microsoft Antigen⁵³ 		

4.3.13 Network Configurations

In the context of communication networks, a topology describes pictorially the configuration or arrangement of a network, including its nodes and connecting lines. There are three major network configurations:

Bus topology: All devices are connected to a central cable, called the bus or backbone. Bus networks are relatively inexpensive and easy to install for small networks. Ethernet systems use a bus topology.

Ring topology: Each device is attached along the same signal path to two other devices, forming a path in the shape of a ring. Each device in the ring has a unique address. Information flow is unidirectional and a controlling device intercepts and manages the flow to and from the ring. The token ring network is the most prevalent form of ring network.

Star topology: All devices are connected to a central hub. Star networks are relatively easy to install and manage, but bottlenecks can occur because all data must pass through the hub.

4.3.14 Enterprise Telecommunications Network (ETN)

The Enterprise Telecommunications Network was built in response to requests from the field to improve telecommunication services. The ETN initiative includes architecture improvements and infrastructure upgrades and the establishment of an Enterprise capability to operate and manage DLA's network. DLA can manage and operate the ETN by entering into DISA's Community of Interest Network (COIN).

The ETN expands the current hub configuration to include a total of 14 core hub sites. The addition of these sites leads to a reduction in the network load currently being experienced by Hill and Tinker. This reduces the number of long haul lines needed to support sites in California, Texas and elsewhere in the western United States. Furthermore, the ETN's inclusion of the NeMO Center as part of the network is an essential piece that aids in monitoring and maintaining the network.

The ETN Diagram is on the next page.

ETN Enterprise Telecommunications Network Diagram (ETN)

⁵³ Microsoft bought Sybari Antigen and renamed it Microsoft Antigen

4.4 Enterprise Management

Systems management encompasses daily operations and management of information systems. It includes such tasks as defining, resolving and managing problems, operating networks and multi-vendor systems, distributing and managing software and data, controlling operations, planning and managing performance, administering security, maintaining asset information, and planning for the future capacity of systems.

A limited number of Enterprise Management products utilize framework technologies. Framework technologies are characterized by a low-level client-server transport and a broad set of functional products. One of the major drawbacks of frameworks is the high failure rate for implementing these types of product. Frameworks are inherently complex and expensive. Historically, DLA has been unsuccessful in accepting tools with this broad of a scope; this is a more of a cultural issue than one of technology. These solutions require a high level of commitment across the full product set and across the Agency; which is not realistically achievable.

Most of the other Enterprise Management products can be characterized as “point” products. They are much more narrowly focused and consequently often provide unique features. In general, a point product can be found that does a specific task better than a corresponding framework product. Point products are typically inexpensive and easy to install. Their chief drawback is the need for integration cross the various products chosen for a specific set of requirements. Historically, DLA has made wide use of point products (e.g., Remedy for help desk support), often to great effect. The issue is to limit the total number of products across the various sites in the Agency.

- Strategic Direction:
- DLA has not committed to an integrated solution for enterprise management. Minimize investment in this product area.

4.4.1 Management Console

At the system or network level, the Management Console maintains a system-wide view to capture all events and determine when an error or fault has occurred. When potential problems are identified, appropriate reporting is made to problem management so that contingency and corrective actions may be taken. Events may pertain to general system performance parameters or may directly reflect a system fault.

Performance management involves the continuous monitoring of system performance. It requires trend analysis as well as system modeling and simulation to determine when system upgrades are required. Control centers should have remote monitoring and diagnosis capability that addresses both the network and end-user equipment.

Fault management involves fault identification, isolation, recovery, resolution, and message filtering. The system must identify and correct system faults at control centers before the user detects the problem. A tracking system will allow the user to determine the status of problem resolution.

The table of approved Management console products is on the following page.

TABLE 78. MANAGEMENT CONSOLE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • IBM Tivoli Enterprise Console • NetIQ AppManager • BMC Patrol Console • Quest InTrust (includes InTrust for Windows, InTrust for AD and Recovery Manager) 		

4.4.2 Monitoring and Reporting

Systems monitoring ensures the integrity of the various platforms, including monitoring pertinent status information from all critical components, monitoring start-ups, shutdowns, or resets on any online or batch component, and monitoring critical file activity. In addition to monitoring the resources that comprise a component of the infrastructure, system monitoring addresses the potentially distributed components of an application.

Network monitoring ensures the integrity of the various networks, including monitoring critical network paths and components.

Network monitoring provides readily available performance, configuration and security information to maintain network integrity for critical network paths and components.

Strategic Direction:

- Use remote monitoring, control, and administration features for DLA server platforms as a strategy for supporting small autonomous sites.

The table of approved Monitoring and Reporting products is on the following page.

TABLE 79. MONITORING AND REPORTING

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Altiris Deployment and Migration • Aprisma Spectrum version 6.0 • BMC Patrol Enterprise Manager; specific BMC adapters are required: <ul style="list-style-type: none"> ▪ BMC Patrol for Microsoft 2000 ▪ BMC Patrol for Unix ▪ BMC Patrol for Oracle ▪ BMC Patrol for Sybase ▪ BMC Patrol for R/3 ▪ BMC Patrol for Firewalls ▪ BMC Patrol Explorer ▪ BMC Patrol Enterprise Manager Connect SNMP ▪ BMC Enterprise ControlStation ▪ BMC Patrol ▪ BMC Patrol DB-Admin Knowledge Module ▪ BMC Patrol for In-Sight Manager ▪ BMC Patrol for webMethods Manager ▪ BMC Patrol for Weblogic • Business Objects Auditor • Concord ⁵⁴ • EMC Control Center Suite • HP OpenView • Microsoft ActiveSync 3.8 ⁵⁵ • NetIQ AppManager • Peregrine InfraTools Network Discovery (PND) • IBM Tivoli Manager 		<ul style="list-style-type: none"> • Microsoft ActiveSync 3.7 and older

4.4.3 Capacity and Performance Planning

This type of planning incorporates not only size restrictions but resource utilization rates including memory, processor capacity, and response times. Each of these factors must be accounted for when planning for application performance and future growth. This type of planning can be used to better utilize DLA corporate assets regardless of location.

Strategic Direction:

- Capacity and performance planning tools will be utilized on major corporate assets due to performance measurements and life cycle planning.

⁵⁴ Used by the NeMO/ETN for network monitoring and reporting.

⁵⁵ Approved only in conjunction with the Defense Property Accountability System (DPAS) program, see Section 6.10

The table of approved Capacity Planning products is on the following page.

TABLE 80. CAPACITY PLANNING

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • EMC Powerpath • BMC Patrol Predict 	<ul style="list-style-type: none"> • BMC Best/1 	

4.4.4 Asset Management

Asset Management as defined here is the process of recording and tracking of ADP online hardware and software inventory. Another version of Asset Management is the process of cradle to grave inventory control. This process assigns accountability and can include items not normally tracked in online asset management.

Strategic Direction:

- Use asset management products to accurately record and track DLA ADP resources. Asset Management tools should be able to track loaded software and existing hardware for deployed resources including PC and Unix systems.
- Tools on the approved list should be able to share data with the other tools on the approved list.

TABLE 81. ASSET MANAGEMENT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Microsoft Systems Management Server 2003 • IBM Tivoli Inventory • IBM Tivoli Asset Management • Peregrine InfraTools Desktop Discovery (IDD) • Peregrine Network Discovery (PND) • Peregrine AssetCenter • MainControl MC/Empower 	<ul style="list-style-type: none"> • Microsoft Systems Management Server 1.2 • Novell Zenworks • Microsoft Systems Management Server 2000 	<ul style="list-style-type: none"> • DLA Unique Products and/or Programs ⁵⁶

4.4.5 End User Support

4.4.6 Call Center

Call centers are central locations where customer calls are handled by a specialized organization, with the aid of computer automation. A call center has the ability to handle and log multiple concurrent calls and forward them to the proper individual for resolution.

The table of approved Call Center products is on the following page.

⁵⁶ Approved only for use in conjunction with the Distribution Standard System (DSS) as indicated in Section 6.6.

TABLE 82 CALL CENTER SOFTWARE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Network Associates Support Magic v.5.x • Fenestrae Faxination • Blue Pumpkin • Verity Response Customer Service Representative • NiceLog 	<ul style="list-style-type: none"> • Network Associates SupportMagic v. 4.x 	

4.4.7 Help Desk

DLA Helpdesks primarily support the internal customer utilizing DLA ADP resources. Helpdesk software must allow the helpdesk to enter, track, update, and close tickets for individual service requests. More prolific helpdesk software solutions will use a knowledge based solution that will allow helpdesk personnel to drill into the problem and employ known fixes for similar problems at the time of the initial problem call, reducing support response times. They will be able to provide automatic call escalation, and detailed reporting for trend analysis.

Strategic Direction:

- DLA Helpdesks software will enable technicians to use knowledge bases to assist in the resolution of calls.

TABLE 83. HELP DESK

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Remedy Help Desk 4.5.2 • Remedy Web • Network Associates Support Magic v.5.x • eHelp RoboHelp 	<ul style="list-style-type: none"> • Network Associates SupportMagic v. 4.x 	

4.4.8 Network Management

Network Management software is used to track and report on network infrastructure and device status. Network management is used to warn of impending network problems or outages so proactive measures can be undertaken to maximize system uptime and minimize downtime; and to identify, account for, control and track the performance of all networked infrastructure components to help ensure overall security measures are implemented and functioning appropriately.

Strategic Direction:

- Network Management products are typically used on a site-specific basis. Tools used should provide visibility to the end point node.

The table of approved Network Management products is on the following page.

TABLE 84. NETWORK MANAGEMENT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • BMC Patrol for Netware • HP OpenView • CiscoWorks • Peregrine Network Discovery (PND) • Citrix Load Balance 1.8 • Spectrum Enterprise Spectroserver 		

4.4.9 Continuity of Operations

To maintain continuity of operations even after loss of data or computer systems, back-up systems should be maintained. There should be a master system and a redundant system. The redundant system should be designed such that both systems will not be damaged by the same incident. For example, the master and redundant systems should be geographically separated so that natural disasters do not damage both. Eventually, Continuity of Operations will include the full range of processes, procedures, and tools required to provide the required levels of redundancy and system integrity necessary to fully protect all of the corporate applications.

TABLE 85. COOP PLANNING SOFTWARE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • COOP Systems MyCOOP 		

4.4.10 Backup and Recovery

DISA provides for backup and recovery of mainframe applications software and data. All-systems backup and offsite storage for disaster recovery is performed weekly. For more frequent disaster recovery backups, application specific backups must be requested and funded.

DLA has a backup and disaster recovery strategy for the DLA owned and operated NT, Unix and other operating system servers. The strategy calls for data center wide backup daily via an automated tape library system with daily offsite storage. Disaster recovery is to a shared hot site. This is key to the Agency's ability to recover from a disaster.

Strategic Direction:

- DLA will develop, implement and enforce a backup and recovery strategy for all tiers of its architecture, at all data centers.
- DLA will acquire tools to automate backup and recovery procedures, and implement at all data centers.

The table of approved Backup and Recovery products is on the following page.

TABLE 86. BACKUP AND RECOVERY / CONTINUITY OF OPERATIONS

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • StorageTek Digital Linear Tape • Veritas Backup Exec for NT • DLT 7000 Auto Tape Library System • Veritas Netbackup Business Server 3.4 • Veritas Netbackup Datacenter • SAP Archived Developer Kit (ADK) 	<ul style="list-style-type: none"> • BrightStor ARCserve Backup ⁵⁷ 	

4.4.11 Configuration Management

Configuration Management is the automatic capture and storage of program component relationships, and maintenance of the history of those relationships and transformations. It is becoming increasingly difficult to maintain, control, and manage software. For that purpose, Software Configuration Management (SCM) has become a major component of the software maturity process. SCM addresses all aspects of configuration management (CM) by managing software and its changes with complete security, integrity, and audit capability for the life of the software.

Initially performed with labor intensive and time consuming manual processes, SCM has evolved, offering a streamlined automated process. Originally limited to change control on individual components, SCM now includes configuration management that addresses versions of whole systems or applications. In short, software configuration management is the process of ensuring that all the pieces that make up a configuration are complete and accurate. For DLA, SCM is an essential element of the software development process. The successful deployment and implementation of configuration management throughout DLA will require incorporation of new configuration management techniques supported by commercial SCM tools.

Strategic Direction:

- Configuration Management will support the “release management” concept, in which major and maintenance releases are appropriately scheduled and controlled “patch” releases occur on an “as needed” basis.

TABLE 87. CONFIGURATION MANAGEMENT SOFTWARE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • CA Endeavor for NT 1.0 • CA Endeavor for Unix 4.0.1 • IBM Infoman • Harvest 7 • IET GuardIEn • IBM Rational Analyst Studio 1.5 • IBM Rational ClearCase 	<ul style="list-style-type: none"> • CA Endeavor for Unix 3.x 	

⁵⁷ Per the CTO (Jan 06), sites using ARCServe are to move to Veritas when the Arcserve maintenance is up for renewal.

4.4.12 Requirements Management

A key element in managing the life cycle of an emerging system is the ability to manage the requirement development process. The DLA has adopted the Capability Maturity Model Integrated (CMMI) developed by the Software Engineering Institute, Carnegie Mellon University to control the Configuration Management (CM) process. A primary focus of the CMMI is to improve the software acquisition development process by establishing a discipline procedure in a series of key process areas. Requirements Management is a systematic approach of finding, documenting, organizing, and tracking the changing requirements of a system. A requirements management process consisting of an automated tool allows functional proponents, program managers and stakeholders the ability to collect, track, and evaluate requirements in a collaborative environment. It consists of a collaborative process by which the functional proponent identifies a condition or capability to which a system must conform. A CM requirements management tool would provide the environment to control changing requirements of a system or application.

TABLE 88. REQUIREMENTS MANAGEMENT SOFTWARE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • IBM Rational RequisitePro ⁵⁸ • IBM Rational SoDA ⁵⁹ 		

⁵⁸ Approved by the Information Operations Panel in Dec 2003 for use by the IDE office. Was not added to the IT Solutions until Jan 2006 while reviewing PST files. J Lelansky

⁵⁹ Approved by the Information Operations Panel in Dec 2003 for use by the IDE office. Was not added to the IT Solutions until Jan 2006 while reviewing PST files. J Lelansky

5. Administrative Systems

5.1.1 *Balanced Scorecard*

Balanced Scorecard is a strategic management tool that provides financial and operational measures tied directly to our mission, vision, and goals to give top managers a fast, comprehensive view of the business. Balanced Scorecard translates mission and strategy into objective measures, organized into four perspectives: Customer, Financial, Internal Business, Learning and Growth.

TABLE 89. BALANCED SCORECARD SOFTWARE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • First Alert by BSCOL Palladium 		

5.1.2 *Portfolio Management*

Portfolio Management is the alignment of portfolios to the Balanced Scorecard in order to manage IT investments based on contribution to mission outcome. Balance scorecard reflects DLA 21 strategic goals and objectives, and emphasizes the corporate/enterprise approach to managing IT investments across DLA. Alignment to Balanced Scorecard highlights three IT portfolios: Business Systems, eBusiness, and Enterprise Infrastructure.

TABLE 90 PORTFOLIO MANAGEMENT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
Primavera ProSight		

5.1.3 *Activity Based Costing*

Activity Based Costing portrays a business as a series of activities related to customer requirements and which have an average cost attached to each of them. The total cost of a product or service is the sum of the costs of the activities required to deliver that product or service. By measuring activities rather than traditional departmental costs, businesses can focus on cross-functional processes in order to identify non value-adding activities and pinpoint the true drivers of cost at each stage.

TABLE 91ACTIVITY BASED COSTING SOFTWARE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • SAS Activity Based Management (ABM) (previously known as Oros Software) • Armstrong-Laing Metify ABM 		

5.2 Safety Metrics

The DLA Safety Office (DSS-EH) currently has a client-server application utilizing an Oracle backend. This application is known as the Safety and Health Information Reporting System (SHIRS). DSS-EH requires a tool to track numerous metrics per The Safety Action Plan (SAP) signed by the Agency Director on 3 January 2001. Portions of the required metrics data for said tracking solution are contained in SHIRS. The ideal implement elected for this effort must fully support the integration of the legacy SHIRS data.

A COTS solution supporting the following features is sought:

- Support for Tracking Weighted Metrics
- Rollup Reporting Capability (supporting lowest level activities thru to DLA HQ level)

This endeavor establishes an effective, proactive safety program in DLA and its field units leading to significant reductions in manpower losses and workers compensation costs due to injuries and illnesses.

The tool chosen for this effort is a COTS package from Oracle called 'Balanced Scorecard'. The application itself does not require a balanced scorecard, but does make use of the features in the package, which includes the tracking of weighted metrics with rollup reports from lower level activities to PLFA and DLA Headquarters levels.

Strategic Direction:

- Congressional Requirements of HR 5408 and the DoD Authorization (Report 106-616) mandate safety metrics data analysis via a tracking tool.

TABLE 92 SAFETY REPORTING SOFTWARE

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
• Oracle Balanced Scorecard ⁶⁰		

5.3 DLA Enterprise Portal (eWorkplace)

The Defense Logistics Agency is currently Modernizing its Business Systems through initiatives to streamline business practices, improve readiness support and reduce the cost of doing business. A part of that effort is replacement of obsolete legacy logistics systems and reengineering desktop access to Agency information and knowledge. An Enterprise Portal strategy based on these technologies has evolved and the specific requirements for this capability have been recently approved through the acquisition process.

The technology used in the Enterprise Portal is based on Commercial-Off-the-Shelf tools compatible with DLA's Business Systems Modernization initiative. Fundamental to this insertion initiative is a

⁶⁰ Not intended for use with the Balanced Scorecard Business Process

move to create a unified top level information and knowledge sharing environment that leverages resources, reduces unnecessary redundancies, provides universal role based access to knowledge assets and a single DLA standard for accessing vital processes.

TABLE 93. ENTERPRISE PORTAL

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none">• SAP Enterprise Portal• SAP Interactive Forms for Adobe		

6. Limited Use / DoD Systems

6.1 CALS - Computer-aided Acquisition and Logistics Support

Computer-aided Acquisition and Logistics Support (CALS) is a DoD-wide initiative to integrate how product data is maintained and accessed by the users, acquirers and vendors of weapon systems. The core of the program is a series of specifications and standards for the exchange of technical orders and engineering drawings, principally Joint Engineering Data Management Information and Control System (JEDMICS).

6.2 JCALS - Joint Computer-aided Acquisition and Logistics Support

JCALS is a part of the Department of Defense's Continuous Acquisition and Life-cycle Support (CALS) strategy. This program provides an Information Management System (IMS) to support uniform logistic and acquisition engineering, management, materiel management, and other life-cycle functional processes.

The JCALS program provides for:

- A common and integrated structure for organizing data about equipment systems during their entire life-cycles.
- Use of digital data supporting defense systems
- Migration from manual, paper-intensive defense system operations to integrated, highly automated acquisition and support processes.

The JCALS strategy is to enable more effective generation, exchange, management, and use of digital data supporting defense systems. JCALS thereby helps the Joint Services migrate from manual, paper-intensive defense system operations to integrated, highly automated acquisition and support processes. PM JCALS is a Joint Service office tasked with creating a digital environment which actively supports the implementation of the acquisition and logistics requirements of the Services and the Defense Logistics Agency (DLA). The PM JCALS office is located at Fort Monmouth, New Jersey and reports to the Program Executive Office Standard Army Management Information Systems.

The mandate of JCALS is to provide a paperless digital environment for managing the support of DoD business areas, particularly weapons systems, using state-of-the-art computer technology. JCALS provides an open system architecture, which allows for the sharing of logistic technical information among the users -- typically the Joint Services and other Government agencies, and the commercial enterprises which support them. Other JCALS concerns include the implementation of DOD-wide standards for logistics technical information; provisions for Uniform Logistics Support (ULS) and Reliability, Availability and Maintenance (RAM) tools for weapon system developers; and a flexible architecture that can grow in size, scope and

functionality, adapting to the needs of weapon systems acquisition and logistic support into the next century.

The Assistant Project Manager for JCALS can be reached at (732) 532-0400 -- DSN 992-0400 <https://www.jcals.army.mil/index.cfm>.

6.3 DMS - Defense Messaging System

DMS provides a fully integrated, supportable, secure, accountable, and completely commercial-off-the-shelf capability for individual and organizational messaging for DoD. The system consists of three main components: a message handling system, directory services, and a management system. The message handling system and directory services are defined respectively by the X.400 and X.500 standards. Management of DMS is provided via a suite of products known as the Management Workstation, which provides local and remote control and monitoring of all components in DMS.

Strategic Direction:

- Implement DMS only for official organizational messaging and secure E-mail

TABLE 94. DEFENSE MESSAGING SYSTEM (DMS)

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Common Desktop with PC Card II • Microsoft Exchange 2003 • Microsoft Outlook 2003 	<ul style="list-style-type: none"> • Microsoft Exchange 2000 • Microsoft Exchange 5.5 • Microsoft Outlook 2002 • Microsoft Outlook 2000 	<ul style="list-style-type: none"> • AUTODIN • IBM/LOTUS Domino

6.4 SPS - Standard Procurement System

The Standard Procurement System (SPS) is an integrated system consisting of a contractor-furnished application, operational data, a relational database management system, government-furnished client/server and stand-alone hardware, operating systems and client/server LAN/WAN connectivity. The SPS supports DoD procurement functions, which include the acquisition of supplies and services.

The table of approved SPS products is on the following page.

TABLE 95. STANDARD PROCUREMENT SYSTEM (SPS)

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Sybase DBMS • Lotus SmarText • Cognos Impromptu • Cognos Powerplay • Cognos Transformer • Cognos Portfolio • Cognos Scheduler • AMS Procurement Desktop - Defense (PD²) • AMS Standard Procurement System - Interface (SPS-I) • AMS Shared Data Warehouse (SDW) 		

6.5 PBDS - Program Budget Decision System

The Under Secretary of Defense for Acquisition and Technology (USD (A&T)) requires all DoD Components to use the Lotus Notes Client to support the Program Budget Decision (PBD) process. The clients are used to pass Microsoft Word documents between USD (A&T) and each Component. The status of decisions may also be checked via accessing the PBD server.

TABLE 96. PROGRAM BUDGET DECISION SYSTEM (PBDS)

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Lotus Notes ⁶¹ • Microsoft Word 		

6.6 DSS - Distribution Standard System (DSS)

DSS has introduced real-time processing and a paperless environment. In addition, process control is a cost effective by-product of the automation. DSS brings business process improvements of inventory accuracy, workload planning, stock receiving, packing, shipping, transportation, hazardous materials handling, and storage location management.

Directed for use:

TABLE 97. DISTRIBUTION STANDARD SYSTEM (DSS)

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • CA Datacom/DB • Welch Allyn SR4800 Imager (scanner) 		

⁶¹ Approved only for use with the Program Budget Decision System

6.7 DAISY - DRMS Automated Information System

DAISY is an accounting and management system for DRMS HQ and its activities.

6.8 DTS - Defense Travel System

DTS is the DoD standard travel system. It is a seamless, paperless automated system which uses PKI to electronically sign authorizations and vouchers.

TABLE 98. DISTRIBUTION STANDARD SYSTEM (DSS)

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> DBSign 		

6.9 ICE - Interactive Customer Evaluation

The Interactive Customer Evaluation (ICE) system (<http://ice.disa.mil/index.cfm>) is a web-based tool, provided by the Department of Defense Quality Management Office, (DoD-QMO) that collects feedback on the programs, products, and services provided by various organizations throughout the DoD. The ICE system allows customers to submit online comment cards to rate the service providers they have encountered at military installations and related facilities around the world. When a customer completes a comment card, the system sends near real-time data directly to the appropriate product or service provider manager. In addition, the system calculates customer service ratings each week and reports trend data, and ICE makes this information easily accessible to managers via online reports.

Directed for use: Internal DLA offices who wish to establish a customer-survey system to rate products and services provided.

6.10 DPAS - Defense Property Accountability System

Defense Property Accountability System (DPAS) is a DoD initiative. DPAS is a migratory system for personal/plant property. In accordance with the Assistant Secretary of Defense (ASD) Memorandum of May 3, 1995 DPAS will be used DOD wide as the property accounting system. The DOD program sponsor is the Defense Logistics Agency (DLA) Comptroller.

DPAS is an on-line interactive system using a relational database with some batch processing for recurring reports and processing interfaces to other automated systems. It is a multifunctional system addressing property accountability, information of property value, equipment utilization, and preventative maintenance scheduling. DPAS provides on-line capability to support all functions that are associated with property accountability and equipment management. The system provides the accountable officer with the capability to update item authorizations, cataloging actions, accountable record processing (e.g. receipts, turn-in, and inventory tracking/status), accounting depreciation data, serial number tracking, component visibility and an automated document register.

DPAS website: https://www.dpas.dod.mil/Common/HTML_Pages/sitemap.htm

Directed for use: to address property accountability, information of property value, equipment utilization, and preventative maintenance scheduling.

TABLE 99. DEFENSE PROPERTY ACCOUNTABILITY SYSTEM (DPAS)

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Zebra Stripe 600 printers • Intermec Scanners • Microsoft ActiveSync 3.8 		<ul style="list-style-type: none"> • Microsoft ActiveSync 3.7

6.11 ASP - Automated Staffing Program

ASP is the Human Resources (HR) tool used in initiating recruitment processes and provides data that is not available through other sources. The database will reside on a common server available to all within the DLA Human Resources Center (DHRC), Customer Support Office Columbus (CSOC) and Customer Support Office New Cumberland (CSON). Access to the system will be through a developed web-based interface. Access to the web-based interface will be based on HR toolkit account.

Directed for use: DHRC, CSOC and CSON staff to capture HR workload so that they can provide accurate, centralized, and standardized HR metrics across the agency.

6.12 Equal Employment Opportunity Tracking

iComplaints is used by the DLA Human Resources Center (DHRC), Customer Support Office Columbus (CSOC) and Customer Support Office New Cumberland (CSON) to manage, track and report on filed Equal Employment Opportunity (EEO) complaints. iComplaints, by MicroPact Engineering, Inc, will allow the DLA HR staff to electronically manage EEO complaints and provide congressionally mandated reports with greater accuracy and reduced effort. The iComplaints software will also allow the DLA HR Staff to comply with the new reporting requirements of the Notification and Federal Employee Anti-Discrimination and Retaliation Act of 2001 (No FEAR) signed into law by President Bush in May 2002.

Additionally, JBOSS runs on a Windows 2000 server connecting to an Oracle 9i database on a Unix HP/UX 11i system. JBOSS uses port 443 for connectivity to iComplaints and a JDBC thin client connects the application to the database. The connection between JBOSS and the database is encrypted.

The table of approved EEO Tracking products is on the following page.

TABLE 100. EQUAL EMPLOYMENT OPPORTUNITY TRACKING

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • iComplaints by MicroPact Engineering Inc • JBOSS (an open source company) 		

Directed for use: DHRC, CSOC and CSON staff to manage, track and report on filed EEO complaints.

6.13 FVS-CM - Foreign Visit System - Confirmation Module

FVS-CM tracks and confirms all foreign visitors at Research, Development, Test, and Evaluation (RDT&E), all DoD Components, and DoD Contractor sites. The primary users of FVS-CM are physical security forces, foreign disclosure officers, and Intel personnel. It will be available on eWorkplace.

FVS-CM is directed for use in the Deputy Secretary of Defense Memorandum dated May 18, 2004, Subject: "Accountability of Department of Defense (DoD) Sponsored Foreign Personnel in the United States (U.S.)". http://spanweb.osd.pentagon.mil/refdocs/fvscm/osd76576-04_wolfuritz_letter.pdf .

6.14 Resource Conservation and Recovery Act (RCRA)

The Resource Conservation and Recovery Act (RCRA) of 1976, which amended the Solid Waste Disposal Act, addresses solid and hazardous waste management activities. The Hazardous and Solid Waste Amendments of 1984 strengthened RCRA's waste management provisions and added Subtitle I, which governs underground storage tanks

The RCRA regulates the management of solid waste, hazardous waste, and underground storage tanks holding petroleum products or certain chemicals.

TABLE 101. RESOURCE CONSERVATION AND RECOVERY ACT

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • McCoy RCRA Compliance CD 		

6.15 Federal Logistics Information on Compact Disc / DVD (FED LOG)

Fed Log is the logistics information system published by the Defense Logistics Information Service (DLIS). It contains cataloging information on 7 million-plus stock numbers and 12 million-plus part numbers; FED LOG is available in CD-ROM or DVD format.

TABLE 102. FED LOG

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> Optimus OptiAuthor / OptiMaster⁶² Haystack Gold 		

6.16 Director's Recipe Database Management System

TABLE 103. DIRECTOR'S RECIPE MANAGEMENT SYSTEM

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> MasterCook ver 9⁶³ 		

6.17 Common Food Management System (CFMS)

CFMS is a food management system developed from a commercial-off-the-shelf (COTS) software product specifically designed to provide processes that give the food services at the military posts, camps and stations much more capability than currently in use. Food services include meal planning, production, cafeteria point of sales terminals, cafeteria managers, inventory and replenishment. There are approximately 5,000 CFMS systems outside the DLA environment that must be centrally monitored and maintained; 95% - 98% of the users are not in DLA. IBM is the prime contractor, with Northrop-Grumman providing Information Assurance support.

The table of approved CFMS Only products is on the following page.

⁶² The US Government Printing Office (GPO) awarded the FEDLOG contract to Optimus Corporation in May 2001. Previous product name was OptiCore/OptiMedia

⁶³ |Requested and approved by J-6 for LTG Dail's chef - 1/10/07, CCB and ITCR submitted/approved

TABLE 104. COMMON FOOD MANAGEMENT SYSTEM

The products listed in this table are only approved for CFMS.

APPROVED FOR USE	PLAN FOR REMOVAL	NOT APPROVED
<ul style="list-style-type: none"> • Business Objects Enterprise XI version 11.0.0.718 • CITRIX Presentation Server 4 version 4.0.9 • GuardianEdge Encryption Plus Hard Disk version 7.0 • Horizon OneSource Application Version 2.0.718 • Horizon OneSource Portlets and JSP code (version to be determined) • IBM HTTP Server v2.0.47.1 • IBM Tivoli Configuration Manager Version 4.2.3 (Monitoring Agent) • IBM Tivoli Configuration Manager Version 4.2.3 • IBM Tivoli Monitoring version 6.1.0 (Monitoring Agent) • IBM Tivoli Enterprise Console version 3.9.1 • IBM WebSphere Portal Server Version 6.0.0.1⁶⁴ • IBM WebSphere Application Server version 6.1 V 6.1.0.1 • Microsoft Windows Embedded Point Of Service (WEPOS) Version 1.0.0 • Microsoft SQL Server 2005 Express Version 9.00.1399.06 		

⁶⁴ will migrate to version 6.0 for IPv6 and 508 compliance

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Appendix B - List of Acronyms

3-D	Three-dimensional
4GL	Fourth Generation Language
ACP	Allied Communications Publication
AD	Active Directory
AIS	Automated Information System
AMS	Automated Manifest System
ANSI	American National Standards Institute
API	Application Program Interface
AQ	Acquisition
ARS	Action Request System
ASC	Accredited Standards Committee
ASP	Automated Staffing Program
ATA	Advanced Technology Attachment
ATM	Asynchronous Transfer Mode
AVI	Audio Video Interactive
BPI	Business Process Improvement
BPR	Business Process Reengineering
BRAC	Base Realignment and Closure
C3I	Command, Control, Communications and Intelligence
C4I	Command, Control, Communications, Computers and Intelligence
CA	Corporate Administration
CALS	Computer-aided Acquisition and Logistics Support
CALS	Continuous Acquisition and Lifecycle Support
CAN	Campus Area Network
CAO	Contract Administration Office
CAS	Contract Administration Services
CASE	Computer-Aided Software Engineering
CD-ROM	Compact Disk - Read Only Memory
CDA	Central Design Activity
CDR	Compact Disk - Recordable
CDS	Cell Directory Service
CFO	Chief Financial Officer
CFMS	Common Food Management System
CGI	Common Gateway Interface
CIM	Corporate Information Management
CIO	Chief Information Officer
CIT	Consumable Item Transfer
CM	Configuration Management
CMIS	Configuration Management Information System
CMM	Capability Maturity Model
COE	Common Operating Environment
COOP	Continuity Of Operations
CORBA	Common Object Request Broker Architecture
COTS	Commercial-Off-The-Shelf
CPU	Central Processing Unit
DAASC	Defense Automated Addressing System Center
DAISRC	DLA Automated Information Systems Review Council
DAISY	DRMS Automated Information System

DASC	DLA Administrative Support Center
DAT	Digital Audio Tape
DBMS	Data Base Management System
DCE	Distributed Computing Environment
DCMC	Defense Contract Management Command
DDNS	Dynamic DNS
DES	Data Encryption Standard
DFAMS	Defense Fuel Automated Management System
DFAS	Defense Finance and Accounting Service
DHCP	Dynamic Host Configuration Protocol
DHTML	Dynamic HyperText Markup Language
DII	Defense Information Infrastructure
DIMM	dual in-line memory module - is a double SIMM
DISA	Defense Information Systems Agency
DISMS	Defense Integrated Subsistence Management System
DISN	Defense Information Systems Network
DLA	Defense Logistics Agency
DLT	Digital Linear Tape
DMA	Direct Memory Access
DMC	Defense Megacenter Columbus
DMI	Desktop Management Interface
DMTF	Desktop Management Task Force
DMS	Defense Message System
DNS	Domain Name System
DoD	Department of Defense
DPACS	DLA Pre-Award Contracting System
DPAS	Defense Property Accountability System
DPMS	Distribution Planning & Management System
DRDA	Distributed Relational Data Access (IBM)
DRMS	Defense Reutilization and Marketing Service
DSIS	Distributed Support Information Standard
DSO	Designated Security Officer
DSS	Decision Support Software or System
DSS	Distribution Standard System
DTD	Document Type Definition
DTP	Distributed Transaction Processing
DTS	Defense Travel System
DVD	Direct Vendor Delivery
EC/EDI	Electronic Commerce/Electronic Data Interchange
ECC	either "error correction [or correcting] code" or "error checking and correcting"
ECPN	Electronic Commerce Processing Node
EDIFACT	Electronic Data Interchange for Administration, Commerce, and Transport
EI	External Environment
EIA	Electronics Industry Association
EIDE	Enhanced Integrated Drive Electronics
EIS	Executive Information System
ESB	Executive Steering Board
FAR	Federal Acquisition Regulation
FAS	Fuels Automated System
FDDI	Fibre Distributed data Interface
FDDI/TP	Fibre Distributed data Interface/Twisted Pair

FIRMR	Federal Information Resources Management Regulation
FLIS	Federal Logistics Information System
FSC	Federal Stock Class
FTP	File Transfer Protocol
FVS-CM	Foreign Visit System – Confirmation Module
GC	General Counsel
GCSS	Global Combat Support System
GDMS	Global Data Management Services
GDS	Global Directory Service
GOTS	Government-Off-The-Shelf
GPRA	Government Performance and Results Act
GUI	Graphical User Interface
HL7	Health Level Seven
HP	Hewlett-Packard
HP/UX	Hewlett-Packard UNIX
HTML	HyperText Markup Language
HTTP	HyperText Transfer Protocol
IDL	Independent Definition Language
I/O	Input/Output
I-CASE	Integrated Computer-Aided Software Engineering
IBM	International Business Machines
ICE	Interactive Customer Evaluation
ICP	Inventory Control Point
IDEF1X	Integrated Definition for Information Modeling
IEEE	Institute of Electrical and Electronics Engineers
IETF	Internet Engineering Task Force
IM	Information Management
IMT-2000	International Mobile Telecommunications for the 2000's
IDL	Interface Definition Language
IP	Internet Protocol
IRM	Information Resources Management
IS	Information Systems
ISA	Interservice Support Agreement
ISIS	Item Standardization Information System
ISDN	Integrated Services Digital Network
ISO	International Standards Organization
ISPF	Interactive System Productivity Facility
IT	Information Technology
ITCC	Information Technology Coordinating Committee (DLSC)
ITMRA	Information Technology Reform Act (1996)
ITMT	Information Technology Management Team
ITSG	Information Technology Standards Guide
ITU-T	International Technical Union - Technical
JCALs	Joint Computer-Aided Acquisition and Logistic Support
JDBC	Java Database Connectivity
JLSC	Joint Logistics Systems Center
JPEG	Joint Photographic Experts Group
JTA	Joint Technical Architecture
LAN	Local Area Network
LCM	Life Cycle Management
LDAP	Lightweight Directory Access Protocol

LRT	-----	Logistics Response Time
LU	-----	Logical Unit
LUNI	-----	LAN Emulation User-to-Network Interface
MAISRC	-----	Major Automated Information Systems Review Council
MHP	-----	Mobile Host Protocol
MIB	-----	Management Information Base
MIME	-----	Multipurpose Internet Mail Extensions
MIS	-----	Management Information System
MM	-----	Materiel Management
MMSS	-----	Materiel Management Standard System
MOCAS	-----	Mechanization of Contract Administration Services
MPEG	-----	Motion Picture Experts Group
MS	-----	Microsoft
MS/DOS	-----	Microsoft Disk Operating System
MSP	-----	Message Security Protocol
MVS/XA	-----	Multiple Virtual Storage/Extended Architecture
NCSA	-----	National Computer Security Association
NetBEUI	-----	NetBIOS Extended User Interface
NetBIOS	-----	Network Basic Input/Output System
NII	-----	National Information Infrastructure
NIPRNET	-----	Unclassified Internet Protocol Router Network
NIPRNET	-----	Non-classified Internet Protocol Router Network
NOS	-----	Network Operating System
NT	-----	New Technology (Microsoft)
NTIS	-----	National Technical Information Service
NTP	-----	Network Time Protocol
OCWG	-----	Office Computing Working Group (DCMC)
ODA	-----	Open Document Architecture
ODBC	-----	Open Database Connectivity
ODIF	-----	Office Document Interchange Format
ODMG	-----	Object Database Management Group
OEM	-----	Other Equivalent Manufacturer
OLAP	-----	On-Line Analytical Processing
OLTP	-----	On-line Transaction Processing
OMB	-----	Office of Management and Budget
OODBMS	-----	Object-Oriented DataBase Management System
OPR	-----	Office of Primary Responsibility
OQL	-----	Object Query Language
ORB	-----	Object Request Broker
OS	-----	Operating System
OSD	-----	Office of the Secretary of Defense
OSF	-----	Open Software Foundation
OSI	-----	Open Systems Interconnect
OURS	-----	Open User Recommended Solutions
PBDS	-----	Program Budget Decision System
PC	-----	Personal Computer
PCI	-----	Peripheral Component Interconnect
PCMCIA	-----	Personal Computer Memory Card International Association
PCMI	-----	President's Council on Management Improvement
PCS	-----	Personal Communications Services
PDA	-----	Personal Digital Assistant

PDF	-----	Portable Document Format
PERL	-----	Practical Extraction and Reporting Language
PGP	-----	Pretty Good Privacy
PNNI	-----	Private Network Node Interface
POAM	-----	Plan of Actions & Milestones
POM	-----	Program Objective Memorandum
POS	-----	Point of Sale
POSIX	-----	Portable Operating System Interface
PPBS	-----	Planning, Programming, and Budgeting System
PPP	-----	Point-to-Point Protocol
RAID	-----	Redundant Arrays of Inexpensive Disks
RAM	-----	Random Access Memory
RCRA	-----	Resource Conservation and Recovery Act
RDA	-----	Remote Data Access
RDBMS	-----	Relational DataBase Management System
RFC	-----	Request for Comment
RMON	-----	Remote Monitoring
ROA	-----	Return on Assets
ROI	-----	Return on Investment
RPC	-----	Remote Procedure Call
RSA	-----	Rivest, Shamir, Adleman
RSVP	-----	Resource ReserVation setup Protocol
SAG	-----	SQL Access Group
SAMMS	-----	Standard Automated Materiel Management System
SBA	-----	Standards Based Architecture
SCM	-----	Software Configuration Management
SCSI	-----	Small Computer System Interface
SD DVD	-----	Super Density Digital Video Disk
SDRAM	-----	synchronous dynamic RAM
SEI	-----	Software Engineering Institute
SGML	-----	Standard Generalized Markup Language
SIMM	-----	single in-line memory module
SMP	-----	Symmetric Multiprocessor
SMTP	-----	Simple Mail Transfer Protocol
SNA	-----	Systems Network Architecture
SNMP	-----	Simple Network Management Protocol
SOE	-----	Standard Operating Environment
SONET	-----	Synchronous Optical NETwork
SPS	-----	Standard Procurement System
SQL	-----	Structured Query Language
SSL	-----	Secure Sockets Layer
STEI	-----	Scientific, Technological, and Engineering Information
STP	-----	Shielded Twisted Pair
TAFIM	-----	Technical Architecture Framework for Information Management
TBD	-----	To Be Determined
TCP/IP	-----	Transmission Control Protocol/Internet Protocol
TI	-----	Texas Instruments
TME	-----	Tivoli Management Environment
TOG	-----	The Open Group
TRM	-----	Technical Reference Model
TSO	-----	Time Sharing Option

UDP	-----	User Datagram Protocol
URL	-----	Uniform Resource Locator
UTP	-----	Unshielded Twisted Pair
VAN	-----	Value Added Network
VLAN	-----	Virtual Local Area Network
VRML	-----	Virtual Reality Modeling Language
WAN	-----	Wide Area Network
WINS	-----	Windows Internet Naming Service
WWW	-----	World Wide Web
XFN	-----	TOG (X/Open) Federated Naming
XPG	-----	X/Open Programming Guide
XSM	-----	TOG (X/Open) Systems Management
Y2K	-----	Year 2000

Appendix C – How to Request Updates to the IT Solutions Document

Web Version on eWorkplace: [*IT Solutions in eWorkplace*](#); the actual URL is:
<https://dla1.eportal.dla.mil/irj/servlet/prt/portal/prtroot/com.sap.km.cm.docs/ewpAgencyDocumentsPublic/HQ/J-6/J-64/J-641/DLA%20IT%20Solutions%20Document.pdf>

These are the navigation steps in eWorkplace:

From eWorkplace, click on “Organizations button” on the upper left bar, then click on "J-6 Info. Ops" under "Detailed Navigation", then click on the "IT Solutions Document" under "J-6 Links", which is on the right side of the screen.

Information Technology Solutions/Capability Request (ITCR) on the J-643 website:
<https://ism.dla.mil/ProSight/>

IT Solutions Adoption One Book: <https://today.dla.mil/onebook/process/150.htm>

Information Technology Requirements One Book: <https://today.dla.mil/onebook/process/54.htm>

The two One Book chapters, above, will be combined into one document with the next One Book update cycle.

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