Index

Symbols

(NCOIC), Network Centric Operations Industry Consortium 243

A

agency enterprise architecture, identifying maturity of an 215 all view (AV) 122 architecture and engineering management 255 Assistant Secretary of Defense (Health Affairs) (ASD (HA)) 101 audio/video, use of 19 automated testing, need for 229

B

Berkman Center 143 Berkman Center For Internet & Society at Harvard University 143 business agility, addressing 260 business challenges, meeting 161 business reference model (BRM) 205, 206

С

CARE 60 centralized storage 196 change, embracing 71 chief information officer (CIO) 2 Clinger-Cohen Act compliance, assessment based on 210 clinical data repository (CDR) 111 cognitive systems, advent of 93 collaboration 258 Combined Joint Task Force (CJTF) 60 commercial-off-the-shelf (COTS) 240 common criteria standards, use of 133 common operating environment (COE) 39 communications and transport assessment 224 communications readiness 81 communities of interest (COIs) 11, 78, 95 community of interest (COI), creation of a 11 computerized physician order entry (CPOE) 111 confidentiality level (CL) 132 content delivery 260 content discovery 260 continuum of care scenario 102 controlled information exchange (CIE) 77 cooperative research and development agreements 89 CORBA (Common Object Request Broker Architecture) 38 core enterprise services 78 coupling, measuring 38

D

data and services environment, enabling the 79 data lifecycle management (DLM) 192 data reference model (DRM) 205, 206, 207 data security issues 170 data strategy goals 7 data, the first rung of the decision making pyramid 22 data, use of 19 decision making pyramid 24, 68 decision making pyramid, understanding the 21 decision making, the highest Rung of the decision making pyramid 25 decreasing coupling, methods for 38 defense-in-depth, defining 130 defense information enterprise, defining the 74 defense information enterprise, principles of the 74 defense information enterprise, strategy details 79 defense publications 12 device configuration, complexity of 170 different industry sectors, addressing benefits to 261 direct-attached storage (DAS) 195 distributed decision making, focus of 55 distributed storage 196 DoD Architecture Framework (DoDAF) 42 DoD business transformation activities 71 DoD domestic transfer policy 88 **DoD Information Assurance Certification** and Accreditation Process (DIACAP) 129, 132 DoD information enterprise, reference model for 75 DoD information enterprise, transformation perspective on the 70 DoD Information Systems Agency (DISA) 123 DoD IPv6, standards guidance 176 DoD laboratories and research centers 89 DoD levels of care 102 DoD MTF care 104 DoD target state, transforming to the 69 DoD technical standards classification 152 DoD to civilian technology transfer 88 dual stack backbone 179

E

EA, defining the current and future state 119
EAL1, functionally tested 135
EAL2, structurally tested 135
EAL3, methodically tested and checked 135
EAL4, methodically designed, tested, and reviewed 135
EAL5, semi-formally designed and tested 136
EAL6, semi-formally verified design and tested 136
EAL7, formally verified design and tested 137
EA planning guidelines 118
EA transition strategy, content for an 209

e-commerce sector 262 electronic healthcare record (EHR) 110, 106, 107 electronics and transportation, convergence of 29 Emergency Response Teams (ERTs) 60 enablement domain 244 enclave, defining 132 end-goal objectives 72 enterprise architecture assessment, of federal agencies 210 enterprise architecture transition strategy, defining an 208 enterprise architecture, understanding of 116 enterprise content management (ECM) 237 enterprise mission areas 76 enterprise, questions to consider for the 198 enterprise sequencing plan 209 enterprise service management (ESM) 259 enterprise storage architecture design 196 enterprise storage management activities 197 evaluation assurance levels (EALs) 135 executive portfolio management 253 extensible markup language (XML) 226

F

federal enterprise architecture (FEA) 96, 204 federal enterprise architecture framework (FEAF) 205 federal enterprise architecture, overview of 204 federal enterprise architecture reference models 205 federated enterprise architecture 252 federated vision and strategy 250 financial services sector 261 force health protection (FHP) 108

G

global combat support system (GCSS) 107 global command and control system (GCCS) 107 global information grid, and network centric warfare 8 global information grid (GIG) 3, 8 governance structure 72 government and corporate evolution planning process 235 greater data storage, need for 190 greater lethality 3

H

header protocols 182 Health & Human Services (HHS) 104 hierarchical storage management (HSM) 192 Humanitarian Assistance/Disaster Relief (HA/ DR) 60 hybrid storage 197

I

IA capabilities, necessary 138 IA challenges, upcoming 139 images, use of 18 industry sectors, changes and benefits to different 260 industry technology areas, upcoming 91 information and knowledge, four domains 57 information assurance, certification and accreditation 132 information assurance, definitions 129 information assurance principles, definition of 129 information assurance strategy goals 8 information, convergence of 21 information enterprise, assumptions for the 73 information enterprise, glimpse at today's 16 information enterprise, structuring the 17 information exchange requirement (IER) 35 information, forms of 17 information functions, within the enterprise 19 information lifecycle management (ILM) 192 information management stages 193 information reliability, challenges in 10 information sharing, overview 96 information sharing strategy 26 information, the second rung of the decision making pyramid 23 information, viewpoint on managing tomorrow's 68 infrastructure readiness, computing 80 integrated DoD EA views 121 integrated information assurance 258

integrated product team (IPT) 235 intelligence, surveillance, and reconnaissance (ISR) 30 intelligence, the fourth rung of the decision making pyramid 25 interfaces, and layers 43 International Federation of Red Cross and Red Crescent Societies (IFRC) 60 International Humanitarian Relief Network (IHRN) 60 international organizations (IOs) 60 Internet, next generation 29 Internet protocol version 6 (IPv6) 214 interoperability, a broad definition of 34 interoperability, architecture strategies for greater 42 interoperability, based on loose coupling 37 interoperability, defining 34 interoperability, definition based on Chairman of the Joint chief of staff instruction 35 interoperability, definition based on the DoD joint publication 34 interoperability, in large scale distributed systems 45 Inter Operability Laboratory (IOL) 230 interoperability, measures of 39 interoperability, next steps toward greater 45 interoperability, system parameters for greater 39 interoperability, types of 35 IP filter list 185 IP header information 173 IPSec authentication method, selecting an 183 IPSec modes, choosing between 182 IPSec policies, creating 184 IPSec, securing data transmission using 182 IPSec tunnel mode, using 183 IPSec, using transport mode 182 IPv4 protocol, limitations of 169 IPv4 to IPv6, transition strategies from 179 IPv6, address format 174 IPv6 base requirements 177 IPv6-capable, definition 177 IPv6 network basics 173 IPv6 networking, addressing scheme for 174 IPv6, over IPv4 tunneling 180

IPv6 product classes 179 IPv6 protocol, key features of the 171 IPv6 protocol, need for a new 169 IPv6, security implications for transition to 181 IPv6, support for net centricity 174 IPv6 transition, federal mandate for 175 IP Version 4 28 IP Version 6 28

J

Joint Theater Medical Information Program (TMIP-J) 107

K

Kerberos, authenticating with 183
key service oriented architecture concepts 157
key technology areas, assessing 237
knowledge and technical connectivity, exploiting 54
knowledge domain 244
knowledge domains, description of 57
knowledge management, within the operational environment 56
knowledge sharing mechanisms 58
knowledge, the third Rung in the decision making pyramid 24

L

Landstuhl Regional Medical Center (LRMC) 104 large scale distributed systems, interoperability in 45 lines of business (LoB) 206 LISI profile 40 LISI profile, five categories of 40 Local Area Networks (LANs) 132 long term strategy challenges 180

M

machine-to-machine (M2M) messaging 259 manufacturing sector 261 mediation 259 message-oriented middleware 38 metadata discovery 259 Microsoft's DCOM (Distributed Component Object Model) 38 military, addressing problems of our 51 military health business transformation 106 military health system, goals of 100 military health system (MHS) 100, 105, 110 military medicine and veteran care, overview of 100 military sector 261 military treatment facilities (MTFs) 104, 111 Mission Assurance Category (MAC) 132 mobile IPv6 components 186 mobile IPv6 networking, Rreview of 185

Ν

nanotechnology 31 National Capital Area (NCA) 111 National Health Information Network (NHIN) 104 Nationwide Health Information Network (NHIN) 106 NATO Rapid Reaction Force (RRF) 62 NCOIC tasking strategy 243 NCOIC, why have a 243 net-centric 1, 2, 6 net-centric approach, fundamental change of the current state 2 net-centric assumptions 73 net-centric challenges 199 net-centric computing, growth of 94 net-centric computing (NCC) 95 net-centric computing, role of 95 net-centric data assessment 218 net-centric data strategy 3 net-centric enterprise architecture 120 net-centric environment, example of future 59 net-centric environment, issues and challenges regarding a 10 net-centric goals for service-oriented architecture 162 net-centric implementation layers 3 net-centric information assurance assessment 224 net-centric information assurance (IA) 3 net-centric information assurance vision 137 net centricity, industry topics related to 89

net centricity, information enterprise goals for 78 net centricity, integrated approach to 3 net centricity, introduction to 2 net centricity, military definition 2 net-centric medicine, transformation perspective on 110 net-centric operational context 54 net-centric operational environment, basic tenets of a 50 net-centric operations and warfare (NCOW) 124 Net-Centric Operations Industry Consortium (NCOIC) 242 net-centric operations, information assurance for 137 net-centric operations (NCO) 244 net-centric principles from command and control, evolution of 86 net-centric publications, literature review of 12 net-centric service-oriented enterprise (NC-SOE) 247 net-centric services assessment 219 net-centric services, example set of 258 net-centric SOA governance 165 net-centric SOA principles 163 net-centric strategy and goals, understanding 5 net-centric systems, industry roadmap towards 88 net-centric systems, industry shift toward 87 net-centric transformation, industry perspective on the 94 net-centric transformation of military medicine 105 net-centric transition, assessing 218 NetOps agility 82 net-ready key performance parameter (NR-KPP) 124 net-ready key performance parameter (NR-KPP), definition of a 124 net-ready key performance parameters, guidance for 124 network and communications 30 network and communications, dependency on 199 network and service monitoring 257

network-attached storage (NAS) 195 Network Centric Operations Industry Consortium (NCOIC), background 243 network centric warfare, challenges in 10 network centric warfare (NCW) 8 networked setting 59 network management principles 56 networks and information integration (NII) 51 new net-centric operational environment, benefits of a 50 next generation internet 28 next generation net-centric capabilities 30 NIPRNet (Non-Classified Internet Protocol Router Network) 30 Non-Governmental Organizations (NGOs) 60 NR-KPP compliance, supporting EA products for 126

0

Office of Management & Budget (OMB) 204 open standards, need for 143 operational environment, fundamental shifts in 53 operational view (OV) 122 Organization for International Relief and Support (OIRS) 60 organization's EA, developing the 117 overall storage requirements, for large organizations 191

P

PAID (Procedures, Applications, Infrastructure, and Data) 41
patient care, continuum of 102
people and process 199
people discovery 259
performance reference model (PRM) 205, 206
platform centric environment, current 52
pre-shared key, authenticating with 183
program management 252
proxying and translation 180

Q

quality of service (QoS) 170

R

real-time collaboration 29
reference model (RM) 124
representative system technical standards profile 153
retail sector 261
RICARE Management Activity (TMA) 101
roadmap activities, description of 250
rxtensible markup language (XML) 36

S

search technology 237 secured availability 80 security and protection of assets, general model for 134 semantic technology and infrastructure 92 service component reference model (SRM) 205, 206, 207 service discovery (Yellow Pages) 258 service enablement processes 254 service knowledge management 258 service-oriented architecture, for the enterprise 156 service oriented architecture (SOA) 96 service oriented enterprise technology features 257 service-oriented system infrastructure 257 service quality management 258 service security 259 service sustainment processes 255 shared awareness 3 shared knowledge and collaboration 54 Simple Network Management Protocol (SNMP) 185 simple object access protocol (SOAP) 226 SIPRNet (Secret Internet Protocol Router Network) 30 SOA adoption, benefits of 159 SOA adoption, enterprise considerations for 160 SOA adoption, example case for 159 SOA-based information security principles 161 SOA-based testing framework 229 solution architecture 254 sourcing/development 255

standards, use of 44 storage architecture review 194 storage area networks (SANs 195 storage design goals, overall 192 storage life cycle management 192 storage requirements, determining 191 storage technologies, types of 195 systems view (SV) 123

Т

tactics, techniques and procedures (TTPs) 60 target state, defining the 248 technical connectivity, and infrastructure 55 technical reference model, defining a 147 technical reference model (TRM) 152, 205, 207 technical standards, key concepts for 146 technical standards reference model (TRM) 206 technical standards view (TV) 123 technology evolution process 235 technology standards organizations 145 testing, first stage 228 testing, later stage 229 text, use of 18 Theater Medical Information Program, case study 107 Theater Medical Information Program (TMIP) 100 TMIP-J data strategy 108 TMIP-J key performance parameters 110 TMIP-J net-centric capability 107 TMIP-J operational capability 108 TMIP-J system of systems 107 tomorrow's enterprise, future trends 28 total cost of ownership (TCO) 192, 197 transformation domain 245 transition mechanism, based on life cycle processes 250 transition mechanism, formulating the 249 transportation 262 transport services 257

U

United Nations (UN) 60 United States Department of Defense (DoD) 2 universal description, discovery, and integration (UDDI 226 University of New Hampshire Inter Operability Laboratory (IOL), case study 230 University of New Hampshire (UNH) 230 unmanned aerial vehicle (UAV) 63 unmanned ground vehicles (UGVs) 30 unmanned underwater vehicles (UUVs) 30 unmanned vehicles 30 unmanned vehicles (UVs) 30 Urban Search and Rescue (USR) 60 user access 76 user capability interface 76 user level agreements 257 U.S. European Command (USEUCOM) 60

V

VA Healthcare Services, transition to 105 Veterans Affairs (VA) 100 Veterans Health Administration, goals of 101 Veterans Health Administration (VHA) 101 voice, use of 18

W

Walter Reed Medical Center 104 Web services descriptive language (WSDL) 226 World Relief 60 wounded warrior care, example of 103

X

X.509 certificates, authenticating with 183