Index

A2A security
  in B2B, 205, 350
  in mobile integration, 210, 354
Abstracts in use cases, 321
Access
  in data integration, 224, 362
  in metadata repository, 229, 368
Accounts, user, 108, 308
Accounts receivable service, 129
Actors in use case diagrams,
  320–321
Adapters
  Current Environment
    Assessment Specification,
    81, 287
  purpose of, 190, 191
  Technical Integration
    Architecture Specification,
    94, 298
Address changes
  online, 152, 327
  retail bank strategy for, 42–43
Aggregation, 149–152
Agility
  composite application
    integration for, 234
  importance of, 233
  as requirement, 9–12
  in service-oriented architecture, 119
Analyst usability requirements, 304
APIs (application programming interfaces), 190
Application integration
  Application Integration
    Implementation
      Specification, 339
    conclusions, 210, 355
    introduction, 195, 342
    key participants, 195, 342
    patterns and services,
      195–208, 342–355
    references, 355
    scope, 195, 342
    table of contents, 341
    template instructions, 340
    best practices, 211
    overview, 185–186
    scenarios, 186
    technologies, 187–194
  Application interfaces
    application integration, 190–191
  Application Integration
    Implementation
      Specification
  B2B, 205, 350
  ESB, 200, 345
  message brokers, 198, 344
  mobile integration, 210, 354
  portal integration, 207, 352
  Business Integration Strategy
    Specification, 54, 280
  Current Environment
    Assessment Specification,
    82–83, 288
  Process Integration
    Implementation
      Specification
  BAM, 255, 384
    process automation, 253, 382
  Technical Integration
    Architecture Specification,
    100, 302
  Application platforms in
    composite application
      integration, 237
  Application programming
    interfaces (APIs), 190

393
Application servers
Application Integration Implementation Specification, 207, 352
Current Environment Assessment Specification, 81, 287


Automation cost reductions from, 12 process integration architecture, 167 Process Integration Implementation Specification, 251–253, 381–382

Availability service integration architecture, 120 Technical Integration Architecture Specification capacity planning view, 112, 310 service-level requirements, 102, 107, 302, 306


process-driven integration, 248–249, 252–255 process integration architecture, 168

Banks address change strategy, 42–43 financial services company, 68

Basic metadata, 154, 329 Berglund, Anders, 141 Berners-Lee, Tim, 141

Best practices application integration, 211 assessment, 86 business drivers and requirements, 34 composite application integration, 240–241 information integration, 229–230


Bibliography, 387–392 BODS (Business Object Documents), 148

Bottom-up approach to services, 121

BPA (Business Process Automation), 167

BPEL (business process execution language), 55, 247

BPEL4WS (Business Process Execution Language for Web Services), 170

BPI (Business Process Integration), 166–167
**Index**

BPM (Business Process Management)  
Current Environment  
Assessment Specification, 82, 288  
process integration  
architecture, 165–166  
solutions, 47  
BPMI (Business Process Management Initiative), 170–171, 175  
BPR (Business Process Reengineering), 20, 162, 243  
Brilliantly simple solution, 135–136  
Broker/enterprise service bus  
B2B, 205, 350  
mobile integration, 210, 354  
Brokers  
analysis integration, 188–190  
Application Integration Implementation Specification, 196–198, 343  
Current Environment  
Assessment Specification, 81, 287  
Browsers  
as access standard, 41  
mobile integration for, 208  
Bug fixing in service-oriented architecture, 120  
Building permits, 235  
Business Activity Monitoring (BAM)  
future of, 47  
process automation, 253, 382–384  
-process driven integration, 248–249, 252–255  
process integration  
architecture, 168  
Business case for strategic enterprise approach, 67–68  
Business costs, Business Drivers and Requirements Specification, 272–273  
Business drivers and requirements  
best practices, 34  
Business Drivers and Requirements Specification, 27–28, 267  
conclusions, 33, 274  
cost estimates, 29, 31, 271–272  
introduction, 28, 270  
key participants, 28, 270  
metrics, 31, 33, 273  
references, 274  
risk, 31, 33, 274  
ROI, 30, 32, 272  
scope, 28, 270  
statement of purpose, 28–30, 270–271  
table of contents, 269  
template instructions, 268  
customer satisfaction, 22–24  
efficiency and competitiveness, 21–22  
mergers and acquisitions, 24  
overview, 19–20  
Process Integration  
Architecture Specification, 172  
regulatory compliance, 24–26  
requirements defining, 27  
Business events  
Delta Airlines, 125  
service integration architecture, 123  
Service Integration  
Architecture Specification, 124–126, 316–317  
Defining business events, 122–124  
Business goals  
Business Drivers and Requirements Specification, 271  
Process Integration  
Architecture Specification, 172  
Business imperatives for enterprise integration  
agility, 9–12  
business changes, 4  
customer interaction, 4–5  
management, 8  
manufacturing, 5  
operations, 7–9  
organization, 8  
real time operations, 5–7  
challenges, 16  
overview, 3–4  
ROI, 12–15  
Business initiatives, 172  
Business integration strategy  
architectural best practices, 45–47  
Business Drivers and Requirements Specification, 30  
Business Integration Strategy Specification, 48, 275  
conclusions, 58–59, 282  
introduction, 48–49, 278  
key participants, 49–51, 278  
mapping to business strategies and initiatives, 51–52, 279  
metrics, 56–57, 281  
references, 282  
risk, 57–58, 282  
scope, 49, 278  
standards, 53–56, 280  
strategic sourcing, 52–53, 279–280  
strategies, 51–52, 278  
table of contents, 277  
template instructions, 276  
failures in, 40–42  
overview, 37–40  
Process Integration  
Architecture Specification, 172  
requirements, 6–7, 9  
success in, 42–45  
time for, 47–48  
Business intelligence in BAM, 255, 384
Index

Technical Integration
Architecture Specification, 94–95, 297
technology, 237–240
CompuCredit integration strategy, 217–218
Conceptual views, 96–98, 300
Confidentiality
Current Environment Assessment Specification, 85, 290
Technical Integration Architecture Specification, 110, 309
Connected applications, 112, 304, 310
Connectivity
application integration, 187
B2B, 205, 350
Technical Integration Architecture Specification, 94, 298
wireless, 208
Consulting costs, 31, 272
Content integration tools, 81, 287
Content objects in unstructured content, 226, 365
Coordination
collaborative process integration, 255
Web services, 168–169
CORBA, 118
Costco process improvements, 178–179
Costs
Business Drivers and Requirements Specification, 29, 31, 271–272
in ROI, 12–14
Credit check service, 129
Criminal history system, 65–67
CriMNet system, 65–67
CRM (Customer Relationship Management) systems, 15, 22, 233
Cultural issues
Business Drivers and Requirements Specification, 274
Business Integration Strategy Specification, 282
Culture of reuse, 265
Current environment assessment best practices and recommendations, 86
Current Environment Assessment Specification, 283
application and data source interfaces, 82–83, 288
conclusions, 86, 291
integration diagrams, 83–84, 288
integration matrix, 83, 288
integration technologies, 80–82, 286–288
introduction, 79, 286
key participants, 80, 286
purpose, 79, 286
references, 291
scope, 80, 286
security, 85–86, 288–290
table of contents, 285
template instructions, 284
overview, 75
technology, 76–79
Customer integration, 82, 288
Customer information system (CIS), 189
Customer management service, 129
Customer Relationship Management (CRM) systems, 15, 22, 233
Customers
change of address
Information Integration Architecture Specification, 152, 327
retail bank, 42–43
customer satisfaction
improving, 22–24
in ROI, 14–15
financing applications, 166
Information Integration Implementation Specification, 221
integration requirements, 297
interaction with, 4–5
record maintenance service, 129
service and support systems
Central Hudson Gas & Electric Corp., 188
information integration patterns table, 152
Vanguard Group, 135–136
Technical Integration Architecture Specification, 307
CWM (Common Warehouse MetaModel), 147–148
Dashboards
BAM, 252, 255, 384
General Electric, 160
process improvement, 163
process integration, 258
Data cleansing, 221, 223–224, 363
Data flow diagrams (DFDs)
Information Integration Architecture Specification, 151–153, 327–328
Process Integration Architecture Specification, 174, 337
Data integration, 220–224, 362–363
Data Integration tool, 362
Data quality, 229–230
Data source access, 224, 362
Data source interfaces, 82–83, 288
Data tools, 81, 287
Data transformation. See Translation and transformation
Data values in metadata, 144
Data warehouses, 221
Database interfaces in legacy integration, 200, 203, 346
DCE (Distributed Computing Environment), 80, 118
Decision points in process flow models, 174
Decision support systems, 221
Defining services, 121–122
Delivery service, 102, 107, 302–303
Dell Inc. manufacturing process, 5
Delta Airlines business events management, 125
Delta Nervous System (DNS), 125
Deming, W. Edward process improvement initiatives by, 161–162
TQM by, 164
Deming Prize, 161
Dependencies in use cases, 321
Deployment in Composite Application Integration Implementation Specification, 240, 376
Descriptions
Service Integration Architecture Specification, 128, 318
Design constraints and guidance, 113, 311
Design patterns, 151
Design reviews, 176, 337
Designers and developers usability requirements, 304
Development in BAM, 252, 255, 384
Business Drivers and Requirements Specification, 31, 272
Composite Application Integration Implementation Specification, 240, 376
in service-oriented architecture, 120
Technical Integration Architecture Specification, 96–97, 100, 301
DFDs (data flow diagrams)
Information Integration Architecture Specification, 151–153, 327–328
Process Integration Architecture Specification, 174, 176, 337
DICl (District Attorney and Courts Interface), 24
Digital cockpits, 8
Digital dashboards
BAM, 252, 255, 384
General Electric, 160
process improvement, 163
process integration, 258
Directory services, 105–107, 112, 305–306, 310
Discussion management, 257, 386
Distributed Computing Environment (DCE), 80, 118
Distributed transaction management, 221
District Attorney and Courts Interface (DICl), 24
DNS (Delta Nervous System), 125
Document type definitions (DTDs), 142
Drivers. See Business drivers and requirements
DTDs (document type definitions), 142
E-buy, e-make, e-sell strategy, 160
E-government initiatives, 235
Email collaborative process integration, 255, 257, 386
mobile integration for, 208
E-Permitting, 235
E-R (Entity-Relationship) diagrams, 143
e-ROSI system, 23
EAI (enterprise application integration), 38, 139
benefits, 34–55
for latency, 214
Electronic Business Extensible Markup Language (ebXML), 147
Electronic Data Interchange (EDI) standard, 25, 193
Electronic exchange for B2B, 203
Electronic Hardware Services (EHS) division, 178–179
EMRs (enterprise metadata repositories)
EMRs, 229
CompuCredit, 217–218
Information Integration Implementation Specification, 229
Index

Enterprise application integration (EAI), 38, 139
benefits, 54–55
for latency, 214
Enterprise content management (ECM), 215, 218, 223, 226, 365
Enterprise information integration (EII)
Application Integration Implementation Specification, 207, 352
information integration, 214, 217
information integration architecture, 150
Information Integration Implementation Specification, 220–221
Enterprise metadata repositories (EMRs)
CompuCredit, 217–218
Information Integration Implementation Specification, 229
Enterprise Resource Planning (ERP) packages, 80
Enterprise Service Buses (ESBs)
application integration, 188–190
Application Integration Implementation Specification, 197–200, 344–345
Current Environment Assessment Specification, 81, 287
EntireX system, 23
Entity-Relationship (E-R) diagrams, 143
ERP (Enterprise Resource Planning) packages, 80
Error rate reductions, 14
ESBs (Enterprise Service Buses) application integration, 188–190
Application Integration Implementation
Format rendering in metadata repository, 229
Four Layer Metadata Architecture, 144, 150
Fully integrated enterprises, reference architecture for, 263–264
Functional scope
Business Drivers and Requirements Specification, 29–30, 271
Process Integration
Architecture Specification, 172
Functionally independent services, 240
Functions in process flow models, 174
General Electric Company
monitoring by, 8
process improvement at, 160
Six Sigma for, 19
General Motors Corporation
design process, 5, 19, 21–22
process improvement at, 166
strategy by, 44–45
General scenarios in use cases, 321
Generalized Markup Language, 141
Goals
Business Drivers and Requirements Specification, 29, 271
Process Integration
Architecture Specification, 172
in use cases, 321
Gold standards in Information Integration, 230
Goldfarb, Charles, 141
Governance, architecture, 72
Government organizations
composite application integration, 235–236
customer satisfaction in, 23–24
online bill access in, 219
technical integration, 89–90

ETL (extract, transform, and load) tools
in information integration, 214, 217
in Information Integration Implementation Specification, 220–221
Events
BAM, 255, 384
Delta Airlines, 125
defining business events p. 122–124
service integration architecture, 122–123
Service Integration
Architecture Specification, 124–126, 316–317
Expertise for integration, 13
Extensible Business Reporting Language (XBRL), 25, 142
Extensible Markup Language. See XML (Extensible Markup Language)
Extensions in use cases, 321
Extract, transform, and load (ETL) tools
in information integration, 214, 217
in Information Integration Implementation Specification, 220–221
Failures, strategy, 40–42
FedEx field force, 9
Finance industry trades, 26
Financial services
Cisco Systems, 5–7
CompuCredit, 39–40
KeyCorp, 68
Flexibility, process integration for, 245
Florida state government, 89–90
Flow models, 173–177, 337
Generalized Markup Language, 141
Goals
Business Drivers and Requirements Specification, 29, 271
Process Integration
Architecture Specification, 172
in use cases, 321
Gold standards in Information Integration, 230
Goldfarb, Charles, 141
Governance, architecture, 72
Government organizations
composite application integration, 235–236
customer satisfaction in, 23–24
online bill access in, 219
technical integration, 89–90
<table>
<thead>
<tr>
<th>Page</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>Index</td>
</tr>
</tbody>
</table>

Granularity, 126, 317
Groupware, 249
Hammer, Michael, 162
Hardware costs, 31, 272
Health Insurance Portability and Accountability Act (HIPAA), 24, 26
Heraclitus on change, 4
High-level organizational structure and support, 134
HTML as access standard, 41
Hubs, message brokers for, 196, 343
IDEF in process flow models, 174, 177, 337
IDEF0 (Integration Definition for Function Modeling), 171
IDL (interface definition language) interfaces, 144
Inconsistencies in information integration, 214
Indexing in data integration, 222
Industry compliance, 25–26
Industry-specific processes, 246
Information and content integration tools, 81, 287
Information design reviews, 155–156, 330–331
Information integration best practices, 229–230
Information Integration Implementation Specification, 357
conclusions, 277, 368
introduction, 219, 360
key participants, 220, 360
patterns and services, 220–229, 360–368
references, 369
scope, 219, 360
table of contents, 359
template instructions, 358
overview, 213–215
scenarios, 215–216

Technical Integration Architecture Specification, 94–95, 297, 299
technology, 216–219
Information integration architecture, 70
best practices, 156–157
enterprise information integration technology, 150
Information Integration Architecture Specification, 323
conclusions, 156, 331
data flow diagrams, 151–153, 327–328
information design reviews, 155–156, 330–331
introduction, 150, 326
key participants, 151, 326
mapping requirements, 151, 326
metadata model, 152–154, 328
references, 331
relationship model, 154–155, 329–330
scope, 151, 326
table of contents, 325
template instructions, 324
metadata, 142–143
architecture, 143–145
standards, 145–149
overview, 139–140
patterns, 149
XML, 141–142
Inputs in Service Integration Architecture Specification, 130, 319
Integration Definition for Function Modeling (IDEF0), 171
Integration definition tools, 100, 301
Integration diagrams, 83–84, 288
Integration hubs, 196, 343
Integration matrix, 83, 288
Integration Metadata Model, 154
Integration support tools, 100, 301
Integration technologies current environment assessment, 76–79
Current Environment Assessment Specification, 80–82, 286–288
Integrity and delivery service, 102, 107, 302–303, 306
Integrity rules, 155, 330
Interaction, customer, 4–5
Interface definition language (IDL) interfaces, 144
Interfaces application. See Application interfaces
Current Environment Assessment Specification, 81, 287
service, 201–203, 240, 346, 376
Internal data and processes, 94, 307
Inventory management Service Integration Architecture Specification, 129
supply chain in, 163
ISO 9001 measurements, 162, 164–165
Java Connector Architecture (JCA), 55, 188, 191
J2EE technology, 118
Key participants Application Integration Implementation Specification, 195, 342
Business Drivers and Requirements Specification, 28, 270
Business Integration Strategy Specification, 49–51, 278
Metadata (cont.)
standards, 145–149
Technical Integration
Architecture Specification, 100, 302
Metadata model, 143, 152–154, 328–329
Metadata repositories
CompuCredit, 217–218
data integration, 224, 362
ECM, 218
Information Integration
Architecture, 156
Implementation
Metamodel layer, 144
Methods in Service Integration
Architecture Specification, 130, 319
Metrics
Also see Measurements
Business Drivers and Requirements
Specification, 31, 33, 273
Business Integration Strategy Specification, 43, 56–57, 281
Miami-Dade County, 235–236
Middleware integration, 253, 382
Middleware technologies
Current Environment
Assessment Specification, 82, 288
Technical Integration
Architecture Specification, 111
Minnesota government, CriMNet system, 65–67
Mobile integration
application integration, 192
Application Integration
Implementation
Specification, 207–210, 352–354
Technical Integration
Architecture Specification, 96, 300
Model Driven Architecture (MDA), 98, 101, 144, 170
Modeling
BAM, 252, 384
process automation, 253, 382
MOF (Meta Object Facility), 144
Monitoring
digital cockpits for, 8
Process Integration
Implementation
Specification, 382–383
Multiple clients in service-oriented architecture, 120
Multiple process types, 249
Multiple-step publishing, 149
Multiple transactions, non-repudiated actions in, 111
nAL (northAmerican Logistics), 193
.NET technology, 118
Netex International, 245
Non-repudiation
Current Environment
Assessment Specification, 85, 290
Technical Integration
Architecture Specification, 110–111, 309
North Dakota government online bill access, 219
northAmerican Logistics (nAL), 193
Notes in use cases, 321
OAG (Open Applications Group), 147–148
OASIS (Organization for the Advancement of Structured Information Standards), 146–147
Organizational issues
Business Drivers and Requirements Specification, 271, 274
Business Integration Strategy Specification, 282
changes, 8
in integration, 13
Process Integration
Architecture Specification, 172
Organizational structure, 71
OSF (Open Software Foundation), 118
OSI (Open Systems Interconnect) Reference Model, 118
One-to-many publishing, 149
One-to-one publishing, 149
Online systems
building permits, 235
customer support
change of address, 152, 327
ordering, 173
legislation access, 219
Ontology, 145
Open Applications Group (OAG), 147–148
Open interfaces, 100, 301
Open Software Foundation (OSF), 118
Open Systems Interconnect (OSI) Reference Model, 118
Operational managers usability requirements, 304
Operations changes, 7–9
Optimizations
cost reductions from, 14
in real time, 5
process optimization, 159
Orchestration, 238, 240, 376
Order in process flow models, 174
Order management service, 129
Organization for the Advancement of Structured Information Standards (OASIS), 146–147
Operations changes, 8
Outputs in Service Integration Architecture Specification, 130, 319
OWL (Web Ontology Language), 146
Packaged application integration, 81, 287
Parallel development, 120
Partners
B2B, 205, 348, 350
Technical Integration Architecture Specification, 297, 307
Patterns and services
Composite Application Integration Implementation Specification, 239–240, 374–376
information integration architecture, 149
Information Integration Implementation Specification, 220–229, 360–368
Process Integration Implementation Specification, 250–257, 380
Performance
KPIs, 20, 31
measuring, 162, 258
Perimeter security, 109, 308
Persistence, 105, 107, 112, 305–306, 310
Personnel costs, 272
PIDX (Petroleum Industry Data Exchange), 25
Plan-Do-Check-Act cycle, 162
Platforms
application, 194
composite application integration, 237
Process Integration Implementation Specification, 257, 386
Point solution technology, 82, 288
Portals
application integration, 191–192
Composite Application Integration Implementation Specification, 240, 376
Current Environment Assessment Specification, 81, 287
Process Integration Implementation Specification, 94–95, 297, 299
Preconditions in use cases, 321
Preferred vendors
Business Integration Strategy Specification, 53, 280
Primary actors in use cases, 321
Priority-setting, 72–73
Proactive management, 46
Process improvements
at General Motors, 166
for margin improvement, 166
in process integration, 246
in ROI, 15
Process integration architecture, 159–161
benefits, 161–162, 165–166
best practices, 178–179
business activity monitoring, 168
Process Integration Architecture Specification, 333
business process descriptions, 172–173, 336
conclusions, 176, 337
introduction, 171, 336
key participants, 171, 336
process design reviews, 176, 337
process flow models, 173–176, 337
references, 337
scope, 171, 336
table of contents, 335
standards, 169–171
technology, 165–169
Process integration implementation
best practices, 257–258
vs. composite integration, 244
Information Integration Implementation Specification, 226, 365
Nextel International, 245
overview, 243–244
Process Integration Implementation Specification, 377
conclusions, 257, 386
introduction, 250, 380
key participants, 250, 380
patterns and services, 250–257, 380
references, 386
scope, 250, 380
table of contents, 379
template instructions, 378
scenarios, 246
in strategy, 44, 46–47
Technical Integration Architecture Specification, 94, 96, 297, 300
technology, 247–249
Process models
Business Integration Strategy Specification, 54, 280
Technical Integration Architecture Specification, 100, 302
BPMI, 175
IDEF, 177
Process models (cont.)
  UML Activity Diagram, 175
  UML Sequence Diagram, 176
Process repositories, 251–253, 382
Process simulation, 21
Procurement process, 53, 280
Project management
  Business Drivers and Requirements Specification, 31, 272
Process Integration Implementation Specification, 255, 257, 386
Project repositories, 257, 386
Property tax information, 235–236
Proprietary technology, 40, 262
Publishing, 149
Purpose in Current Environment Assessment Specification, 79, 286
Quality measurements, 164
Queries in Information Integration Implementation Specification, 224, 362
metadata repository, 229, 368
unstructured content integration, 226, 365
RDF (Resource Description Framework), 146
Real-time management dashboards, 258
Real time operations, 5–7
BAM, 221
General Electric, 160
Wal-Mart, 10–11
Redundancy
  in application integration, 211
  in integration strategy, 44
  in TCO, 262
Reference Architecture, 263–264
Registration, student, 121
Regulatory compliance, 24–26
Reiner, Gary, 160
Relationship model, 154–155, 329–330
Rendering, 223, 226, 229, 365, 368
Replication
data integration, 224, 363
metadata repository, 229, 368
Repositories
  collaborative process integration, 257, 386
  competency center, 156
  metadata. See Metadata repositories
  process, 251–253, 382
Requirements
  defining, 27
  integration strategy, 44
  in use cases, 321
Research Information Exchange Markup Language (RIXML), 25
Resource Description Framework (RDF), 146
Response time, 112, 304, 310
Retail bank, address change strategy by, 42–43
Return on assets, 262–263
Return on investment. See ROI (return on investment)
Reuse
  application integration, 211
  in best practices, 265
  composite application integration, 234, 240–241
  in integration strategy, 44
  process integration, 258
Revenues
  Business Drivers and Requirements Specification, 273
  in ROI, 14
Rewards in process integration, 258
Risks
  Business Drivers and Requirements Specification, 31, 33, 274
  Business Integration Strategy Specification, 57–58, 282
RXML (Research Information Exchange Markup Language), 25
Road maps in strategy, 43
ROI (return on investment), 12
  Business Drivers and Requirements Specification, 30, 32, 272
  business process improvements in, 15
  cost reductions in, 12–14
  customer satisfaction in, 14–15
  in process improvements, 19–20
  revenue increases in, 14
  in service-oriented architecture, 119
ROI Analysis Template, 32
Roles
  Process Integration Implementation Specification, 385
  RosettaNet transactions, 12–14
  Ross, Douglas T., 171
Routing
  B2B, 205, 350
  mobile integration, 210, 354
  Technical Integration Architecture Specification, 94, 298
Rules
  BAM, 168
  Information Integration Architecture Specification, 155, 330
  process automation, 253, 382
  process flow models, 173–174
  Rules engines in process integration, 247–248
Saatchi, Guido, 39–40
Sacramento County government, 23–24
Sarbanes-Oxley Act, 24, 246
<table>
<thead>
<tr>
<th>Specifications (cont.)</th>
<th>Statement of purpose</th>
<th>Technical Integration Architecture Specification, 91, 293</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information Integration</td>
<td>Business Drivers and Requirements Specification, 28–30, 270–271</td>
<td></td>
</tr>
<tr>
<td>Information Integration Implementation Specification, 219, 357</td>
<td>Strategic enterprise approach, business case for, 67–68</td>
<td></td>
</tr>
<tr>
<td>Process Integration Architecture Specification, 171, 333</td>
<td>Strategic initiatives for efficiency, 21</td>
<td></td>
</tr>
<tr>
<td>Process Integration Implementation Specification, 250, 377</td>
<td>Strategic integration, 265</td>
<td></td>
</tr>
<tr>
<td>Service Integration Architecture Specification, 123, 313</td>
<td>Strategic sourcing, 52–53, 279–280</td>
<td></td>
</tr>
<tr>
<td>Technical Integration Architecture Specification, 91, 293</td>
<td>Strategy. See Business integration strategy</td>
<td></td>
</tr>
<tr>
<td>SQL as access standard, 41</td>
<td>Structured data integration, 216</td>
<td></td>
</tr>
<tr>
<td>Standard Generalized Markup Language (SGML), 141</td>
<td>Student services, 121</td>
<td></td>
</tr>
<tr>
<td>Standards</td>
<td>Success measurements, 164–165</td>
<td></td>
</tr>
<tr>
<td>application integration, 211</td>
<td>Successful operation responses in use cases, 321</td>
<td></td>
</tr>
<tr>
<td>Business Integration Strategy Specification, 53–56, 280</td>
<td>Supplier integration requirements, 93, 297</td>
<td></td>
</tr>
<tr>
<td>composite application integration, 234</td>
<td>Supply chain General Motors, 166</td>
<td></td>
</tr>
<tr>
<td>EDI, 25, 193</td>
<td>Levi Strauss &amp; Co., 163</td>
<td></td>
</tr>
<tr>
<td>in integration strategy, 40–41, 262</td>
<td>Synchronization, data, 224, 363</td>
<td></td>
</tr>
<tr>
<td>MDA, 101</td>
<td>Szygenda, Ralph, 21, 45, 166</td>
<td></td>
</tr>
<tr>
<td>metadata, 145–149</td>
<td>Tactical initiatives, 21, 38</td>
<td></td>
</tr>
<tr>
<td>process integration architecture, 169–171</td>
<td>Target systems, 155, 330</td>
<td></td>
</tr>
<tr>
<td>service integration architecture, 134</td>
<td>Tasks in process flow models, 174</td>
<td></td>
</tr>
<tr>
<td>Web services, 46</td>
<td>TCO (total cost of ownership), 262</td>
<td></td>
</tr>
<tr>
<td>XA, 221</td>
<td>TCP/IP as network standard, 41</td>
<td></td>
</tr>
<tr>
<td>XMI, 147–148</td>
<td>Technical integration architecture, 69–70</td>
<td></td>
</tr>
<tr>
<td>XML-based, 25–26</td>
<td>best practices, 113</td>
<td></td>
</tr>
<tr>
<td>Standards profiles, 98, 100–101, 301–302</td>
<td>overview, 89–91</td>
<td></td>
</tr>
<tr>
<td>State governments</td>
<td>Technical Integration Architecture Specification, 91, 293</td>
<td></td>
</tr>
<tr>
<td>CriMNet system, 65–67</td>
<td>architecture description, 96–100, 300–301</td>
<td></td>
</tr>
<tr>
<td>online bill access system, 219</td>
<td>architecture requirements, 92–96, 296–300</td>
<td></td>
</tr>
<tr>
<td>technical integration in, 89–90</td>
<td>capacity planning view, 111–113, 309–310</td>
<td></td>
</tr>
<tr>
<td>conclusions, 113, 311</td>
<td>design constraints and guidance, 113, 311</td>
<td></td>
</tr>
<tr>
<td>introduction, 91, 296</td>
<td>key participants, 92, 296</td>
<td></td>
</tr>
<tr>
<td>references, 311</td>
<td>scope, 92, 296</td>
<td></td>
</tr>
<tr>
<td>standards profiles, 98, 100–101, 301–302</td>
<td>table of contents, 295</td>
<td></td>
</tr>
<tr>
<td>template instructions, 294</td>
<td>Technical issues</td>
<td></td>
</tr>
<tr>
<td>Current Environment Assessment Specification, 80–82, 286–288</td>
<td>Technologies</td>
<td></td>
</tr>
<tr>
<td>Technical Integration Architecture Specification, 92–96</td>
<td>Temporal events, 124</td>
<td></td>
</tr>
<tr>
<td>Testing</td>
<td>Testing in information integration, 230</td>
<td></td>
</tr>
<tr>
<td>in service-oriented architecture, 120</td>
<td>in service-oriented architecture, 120</td>
<td></td>
</tr>
<tr>
<td>Texas A&amp;M University student services, 121</td>
<td>Throughput in Technical Integration Architecture Specification, 112, 304, 310</td>
<td></td>
</tr>
<tr>
<td>Throughput in</td>
<td>Top-down approach to services, 121</td>
<td></td>
</tr>
<tr>
<td>Total cost of ownership (TCO), 262</td>
<td>Total Quality Management (TQM), 162, 164</td>
<td></td>
</tr>
</tbody>
</table>
TP (transaction processing) monitors, 221
Trades in finance industry, 26
Training, 119, 134–135
Transaction processing (TP) monitors, 221
Transactions
Information Integration Implementation Specification, 224, 363
capacity planning view, 112
nonrepudiated, 111
service-level requirements, 105, 107
Translation and transformation application integration, 187
Application Integration Implementation Specification, 339
B2B, 205, 350
ESB, 198, 200, 345
mobile integration, 210, 354
Composite Application Integration Implementation Specification, 240, 376
Information Integration Implementation Specification metadata repository, 229, 368
unstructured content, 223–224, 365
Technical Integration Architecture Specification, 95, 299
Triggers in use cases, 321
Trunking services, 245
Turnaround times, 112, 304, 310
UDDI standard, 46
UML (Unified Modeling Language) models, 144, 170
activity diagrams, 175
sequence diagrams, 176
Unitary logins, 108, 308
University student services, 121
Unstructured content integration, 216, 223, 225–226, 363–365
Upper level management support, 265
Usability, 103–104, 107, 304, 306
Use Case Specification, 132–133
Use cases, 131–132, 320–321
user accounts in authentication, 108, 308
User types in authentication, 108, 307
Value-Added Networks (VANs) for cost reductions, 12–14
northAmerican Logistics, 193
Vanguard Group customer service system, 135–136
Variation causes in process improvement, 161
Vendors
Business Integration Strategy Specification, 53, 280
current assessment, 77
Version control, 254, 257, 386
Views in Information Integration Implementation Specification data integration, 224, 363
unstructured content integration, 226, 365
Virtual data warehouses, 227
Virtual factories, 166
VISA, XML Invoice Specification by, 25
W3C (World Wide Web Consortium) for metadata, 145–146
Workflow process integration architecture, 167
Process Integration Implementation Specification automation, 253, 382
collaborative process integration, 255, 257, 386
Workflow Management Coalition (WfMC), 170–171
World-class finance, Cisco Systems, 5–7
World Wide Web Consortium (W3C) for metadata, 145–146
WSCI (Web Service Choreography Interface), 56
WSDL standard, 46
WSO (Web Service Orchestration), 168–169
XA transaction management standard, 221
| XBRL (Extensible Business Reporting Language), 25, 142 |
| XMI standard, 147–148 |
| XML (Extensible Markup Language) |
| ESB, 344 |
| importance, 140 |
| northAmerican Logistics, 193 |
| overview, 141–142 |
| service-oriented architecture, 46 |
| XML-based integration standards, 25–26 |
| XML Gateway, 218 |
| XML Invoice Specification, 25 |
| Zero latency, 5 |