Standards and Specifications

This appendix provides references to the standards and specifications mentioned throughout this book. You will find the name of the standard, the acronym used to refer to the standard, the URL of the full standard specification, and a short explanation.

Standard	Acronym	Link	Explanation
ActiveX® Data Object	ADO.NET	http://msdn.microsoft.com/ en-us/library/ e80y5yhx.aspx	ADO.NET is a set of classes that expose data access services for .NET Framework programmers. ADO.NET provides a rich set of components for creating distributed, data-sharing applications.
Advanced Encryption Standard	AES	http://www.csrc.nist.gov/ publications/fips/fips197/ fips-197.pdf	The AES algorithm is a block cipher encryption algorithm supporting 128,192 or 256-bit key length. The National Institute of Standards and Technology (NIST) adopted AES as a standard in 2002. Government organizations have adopted AES as the encryption standard for data transmission.
American National Standards Institute	ANSI	http://www.ansi.org/	ANSI serves as administrator and coordinator of the United States standardization system. The institute oversees the creation, promulgation, and use of thousands of norms and guidelines that directly impact businesses in nearly every sector. ANSI is also actively engaged in accrediting programs that assess conformance to standards, including globally recognized cross-sector programs such as the ISO 9000 and ISO 14000.
Application Level Events Standard	ALE	http://www.epcglobalinc. org/standards/ale/ale_1_ 0-standard-20050915.pdf	ALE is a standard that defines an interface for events on Electronic Product Codes (EPC).

Standard	Acronym	Link	Explanation
Association for Cooperative Operations Research and Development	ACORD	http://www.acord.org	ACORD is a global, nonprofit standards development organization serving the insurance industry and related financial services industries. ACORD's mission is to facilitate the development of open consensus data standards and standard forms.
Asynchronous JavaScript™ and XML	AJAX	http://www.openajax.org/index.php	AJAX includes a group of web development techniques used on the client-side to create interactive web applications or rich Internet applications. The use of AJAX enables web applications to asynchronously retrieve data from the server without interfering with the display and behavior of the existing web page.
Atom Syndication Format/Atom Publishing Protocol	Atom	http://tools.ietf.org/html/rfc4287	Atom applies to two related standards: the Atom Syndication Format, which is an XML language used for web feeds, and the Atom Publishing Protocol (AtomPub or APP), which is an application-level protocol for publishing and editing Web resources. The protocol is based on HTTP transfer of Atom-formatted representations.
Business Process Execution Language / Web Services Business Process Execution Language	BPEL / WS-BPEL	http://docs.oasis-open.org/wsbpel/2.0/wsbpel-v2.0.pdf	BPEL, a shortened form for WS-BPEL, defines a language for specifying business process behavior based on Web Services. BPEL provides the language to model the behavior of both executable and abstract processes. By doing so, it extends the Web services interaction model and enables it to support business transactions. WS-BPEL defines an interoperable integration model that facilitates the expansion of automated process integration.
Comma Separated Values	CSV	http://tools.ietf.org/html/rfc4180	CSV is a delimited data format where the fields and columns are separated by the comma character and records and rows are separated by newlines. If a field contains a special character (comma, newline, or double quote), it must be enclosed in double quotes. CSV file format is often used to exchange data between different applications. CSV files have become somewhat obsolete due to XML data exchange possibilities.
Common Information Model	CIM	http://www.iec.ch/	CIM is a semantic model that describes the components of an electric power system. Developed by the electric power industry, the International Electrotechnical Commission (IEC) has officially adopted it to allow application software to exchange information about the configuration and status of an electrical network.
Common Warehouse Metamodel	CWM	http://www.omg.org/technology/documents/formal/cwm.htm	CWM is a specification developed and owned by the Object Management Group for modeling metadata of most objects found in a data-warehousing environment. CWM specifies interfaces that can be used to enable interchange of warehouse and business intelligence metadata between warehouse tools, warehouse platforms, and warehouse metadata repositories in distributed heterogeneous environments.

Standard	Acronym	Link	Explanation
Continuous Query Language	CQL	http://ilpubs.stanford.edu:8090/758/1/2003-67.pdf	CQL is an SQL-based declarative language for registering continuous queries against data streams and updatable relations.
Control Objectives for Information and Related Technology	COBIT	http://www.isaca.org/Content/NavigationMenu/Members_and_Leaders1/COBIT6/Obtain_COBIT/Obtain_COBIT.htm	COBIT is a set of standards and best practices created by the Information Systems Audit and Control Association (ISACA) and the IT Governance Institute (ITGI) in 1996 that form an IT governance framework including a supporting toolset that enables auditors, managers, and IT users to bridge the gap between control requirements, technical issues, and business risks. COBIT 4.1 is the latest release of guidance materials for IT governance designed to assist in the implementation of effective IT governance throughout an enterprise.
Data Encryption Standard	DES	http://csrc.nist.gov/publications/fips/fips46-3/fips46-3.pdf	DES, considered the predecessor to AES, is a block cipher encryption algorithm adopted as a standard by NIST in 1976. It supports only 56-bit key length and is considered insecure for most applications. It has been derived from the IBM Lucifer algorithm.
Document Model ePedigree	ePedigree	http://www.epcglobalinc.org/standards/pedigree/	The ePedigree standard specifies the architecture for the maintenance and exchange of electronic pedigree documents for use by pharmaceutical supply chain participants. It can be simply described as an electronic document which satisfies a pedigree requirement. The primary purpose of an ePedigree is to protect consumers from contaminated medicine or counterfeit drugs.
Dojo Toolkit	DOJO	http://www.dojotoolkit.org/	DOJO is a modular open source JavaScript library designed to ease the rapid development of cross-platform JavaScript- and Ajax-based applications and web sites.
Securities and Exchange Commission Electronic Data Gathering, Analysis, and Retrieval	SEC EDGAR	http://www.sec.gov/edgar.shtml	EDGAR performs automated collection, validation, indexing, acceptance, and forwarding of submissions by companies and others who are required by law to file forms with the U.S. SEC. All companies, foreign and domestic, are required to file registration statements, periodic reports, and other forms electronically through EDGAR. Anyone can access and download this information for free.
Electronic Data Interchange	EDI	http://en.wikipedia.org/wiki/Electronic_Data_Interchange	EDI standards define certain messaging formats for business documents to simplify exchange of electronic documents between companies. EDI implies a sequence of structured messages between two parties, either of whom may serve as originator or recipient. This transfer of structured data requires agreed message standards between the parties.

Standard	Acronym	Link	Explanation
Electronic Product Codes	EPC	http://www.gs1.org/product ssolutions/epcglobal/	The EPC is a set of identification coding or numbering standards. The EPC was created to track goods using RFID technology. It is designed to meet the needs of various industries, while guaranteeing uniqueness for all EPC-compliant tags.
EPCglobal	EPCglobal	http://www.epcglobalinc. org/about/	EPCglobal is leading the development of industry-driven standards for the EPC to support the use of Radio Frequency Identification (RFID) in today's fast-moving, information-rich, trading networks.
Electronic Product Code Information Service	EPCIS	http://www.epcglobalinc. org/standards/epcis	Standards designed to enable disparate applications to leverage EPC data via EPC-related data sharing, both within and across enterprises.
eXtensible Access Control Markup Language	XACML	http://www.oasis-open.org/committees/ download.php/2713/ Brief_Introduction_to_ XACML.html	XACML is an OASIS standard that describes both a policy language and an access control decision request and response language. The policy language and the access control are implemented in XML. The policy language is used to describe general access control requirements, and the request/response language enables writing a query to ask whether a given action should be allowed and interprets the result.
eXtensible Markup Language	XML	http://www.w3.org/XML/	XML is a simple and flexible format derived from SGML (ISO 8879) that specifies the set of rules for encoding documents electronically. It is defined in the XML 1.0 Specification produced by the World Wide Web Consortium (W3C). Originally designed to meet the challenges of large-scale electronic publishing, XML is also playing an increasingly important role in the exchange of a wide variety of data on the Web and elsewhere.

Currently, hundreds of XML-based languages and specifications have been developed, including RSS, Atom, SOAP, and XHTML. XML-based formats have also become the default for most office productivity tools. |
| File Transfer Protocol | FTP | http://tools.ietf.org/html/ rfc959 | FTP is a network protocol to transfer data from one computer to another over a TCP/IP network. FTP is built on a client-server architecture and utilizes separate control and data connections between the client and server applications. |
| General Parallel File System | GPFS | http://www.almaden.ibm. com/StorageSystems/ projects/gpfs/ | GPFS is a high performance, scalable clustered file system that enables high availability and is optimized for multi-petabyte storage management. GPFS is derived from the Tiger Shark file system, developed at the IBM Almaden Research Center. |

Standard	Acronym	Link	Explanation
Global Data Synchronization (Network)	GDSN	http://www.gs1.org/ services/gsmp/kc/gdsn/	GDSN is a network of interoperable data pools and a global registry called the GS1 Global Registry, used for communicating master data (Catalog Item and Party) between trading partners. GDSN helps to keep trading partners in sync by ensuring product data, such as the category and description stored by one company, matches the data stored by their trading partners. Organizations submit their product data in a specified format to data pools around the globe for validation against a global registry allowing changes to be flagged immediately to all connected retailers and manufactures.
Global Trade Item Number	GTIN	http://www.gtin.info/	GTIN is a data structure that employs 14 digits used as a global item identifier for trade and can be encoded into various types of data carriers.
Graphics Interchange Format	GIF	http://www.w3.org/ Graphics/GIF/ spec-gif89a.txt	GIF is a format to store images introduced by CompuServe in 1987 and that was widely adopted by the industry due to its wide support and portability.
Groovy (programming language)	Groovy	http://jcp.org/en/jsr/ detail?id=241	Groovy is an object-oriented programming language for the Java™ Platform created as an alternative to the Java programming language. It is a dynamic language with features similar to Python, Ruby, and Smalltalk languages, but uses a syntax similar to the Java language and as a result, most of the modern programming features from the Java language are available to Java developers with almost-zero learning effort.
GS1	GS1	http://www.gs1.org/	GS1 is the organization that leads the global effort around the design and implementation of standards and solutions to improve the efficiency and visibility of supply and demand chains globally and across sectors. The standards created by GS1 are the most widely used supply chain standards in the world.
Hierarchical Storage Management	HSM	http://www-01.ibm.com/ software/tivoli/products/ storage-mgr-hsm/	HSM is a data storage technique that automatically moves data between high-cost and low-cost storage media. Initially implemented in the IBM mainframe systems, it has been used in all versions of UNIX and other operating systems.
High Availability Disaster Recovery	HADR	http://publib.boulder.ibm. com/infocenter/db2luw/v8/ index.jsp?topic=/com.ibm. db2.udb.doc/core/ c0011585.htm	HADR is a data replication feature that provides a high availability solution for both partial and complete site failures. HADR protects against data loss by replicating data changes from a source database, called the primary, to a target database, called the standby.
Hypertext Transfer Protocol	HTTP	http://www.w3.org/ Protocols/rfc2616/rfc2616. html	HTTP is a generic, stateless, application-level protocol for distributed, collaborative information systems.

Standard	Acronym	Link	Explanation
Hypertext Transfer Protocol Secured over Secure Sockets Layer	HTTPS	http://www.ietf.org/rfc/ rfc2818.txt	HTTPS is a combination of the Hypertext Transfer Protocol (HTTP) with the Secure Sockets Layer/Transport Layer Security (SSL/TLS) protocol to provide encryption and secure identification. Because of the security layer, HTTPS connections are often required for payment trans-actions on the World Wide Web and for sensitive transac-tions in corporate information systems. HTTPS is a web protocol developed by Netscape using SSL as a sub-layer to HTTP.
IEEE Std 1471-2000		http://standards.ieee.org/ reading/ieee/std_public/ description/se/ 1471-2000_desc.html	IEEE Std 1471-2000 is also known as the IEEE Recom-mended Practice for Architectural Description of Soft-ware-Intensive Systems. It provides guidelines to addresses the activities of the creation, analysis, and sus-tainment of architectures of software-intensive systems, and the recording of such architectures in terms of archi-tectural descriptions. In 2007, this standard was adopted by ISO/IEC JTC1/SC7 as ISO/IEC 42010:2007, *Systems and Software Engineering—Recommended practice for architectural description of software-intensive systems.*
Intelligent Utility Network	IUN	http://www.asiapacificpart nership.org/pdf/PGTTF/ ddsm/presentations/The_ Power_of_Partnerships_ Erica_Ferro.pdf	An IUN is a digital, open standards-based network of sen-sors, metering, communications, computer processors, and analytics that connects an entire utility company from power plant to plug. These connected systems provide a utility with near-real-time data and information to better manage the grid infrastructure, enabling fewer and shorter power outages, improved customer service, and the ability to source and deliver power more efficiently, including renewable energy.
Interactive Finan-cial eXchange	IFX	http://www.ifxforum.org/	The IFX Forum was created in 1997 by industry leading financial institutions, service providers, and independent software vendors with the objective to create a messaging standard for financial services.
International Organization for Standardization	ISO	http://www.iso.org/iso/ home.htm	A nongovernmental organization, ISO is the world's largest developer and publisher of international standards. ISO is a network of the national standards organizations from more than 163 countries and members with roots uniquely in the private sector. ISO has a Central Secre-tariat in Geneva, Switzerland, that coordinates the system.
Internet Small Computer System Interface	iSCSI	http://www.ietf.org/ rfc/rfc3720.txt	iSCSI is an Internet Protocol (IP)-based storage network-ing standard for linking data storage facilities. By carrying SCSI commands over IP networks, iSCSI is used to facili-tate data transfers over intranets and to manage storage over long distances. iSCSI was developed by the Internet Engineering Task Force (IETF).

Standard	Acronym	Link	Explanation
ISO 2709:2008 Standard		http://www.iso.org/iso/iso_catalogue/catalogue_ics/catalogue_detail_ics.htm?csnumber=41319	ISO 2709:2008 Standard is a format for the exchange of bibliographic information originally developed in the 1960s for the Library of Congress to encode the information printed on library cards. It was first adopted as ANSI Standard Z39.2, and it is considered to be one of the first standards for information technology. ISO 2709:2008 describes a general framework designed especially for communications between data processing systems.
Java 2 Platform, Enterprise Edition	J2EE™	http://java.sun.com/j2ee/overview.html	J2EE is the Java 2 Enterprise Edition developed by Sun Microsystems and defines the standard for developing multi-tier enterprise applications using the Java programming language.
Java Message Service	JMS	http://java.sun.com/products/jms/	Based on the J2EE platform, the JMS API is a messaging standard that allows application components to create, send, receive, and read messages in a distributed, loosely coupled, reliable, and asynchronous communication.
Joint Photographic Experts Group	JPEG	http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=33877	JPEG is a commonly used method of compression for photographic images created by the Joint Photographic Experts Group, an ISO committee.
JavaScript Object Notation	JSON	http://www.json.org/	JSON is a lightweight data-interchange format based on a subset of the JavaScript Programming Language. JSON is a text format that is completely language independent but uses conventions that are familiar to programmers of the C-family of languages, including C, C++, C#, Java, JavaScript, Perl, Python, and others.
Java Specification Request (JSR) 168 Portlet Specification	JSR 168	http://www.jcp.org/en/jsr/detail?id=168	JSR 168 is a standard that defines the implementation of portlets for the J2EE platform. The Java Portlet Specification achieves interoperability among portlets and portals by defining the APIs for portlets and by standardizing the rules for preferences, user data, portlet requests and responses, deployment, packaging, and security.
JSR 286 Portlet Container Specification	JSR 286	http://developers.sun.com/portalserver/reference/techart/jsr168/#2	JSR 286 is the Java Portlet Specification 2.0. This standard brings to the Java portlets key capabilities such as: • Enables portlet filters with which portlets can dynamically transform the content of portlet requests and responses • Enables portlets to communicate with each other through events • Portlets can specify which render parameters they can share with other portlets • Portlets can serve resources within the portlet context

Standard	Acronym	Link	Explanation
Lightweight Directory Access Protocol	LDAP	http://tools.ietf.org/html/rfc4510	LDAP is an Internet protocol for querying and modifying distributed directory services that run over TCP/IP. LDAP was designed at the University of Michigan to adapt the enterprise directory system (X.500) to the modern Internet. LDAP is not limited to contact information, or even information about people. LDAP is used to look up encryption certificates, pointers to printers, and other services on a network, and provides Single Sign-On (SSO) where one password for a user is shared between many services.
Message Digest Algorithms	MD2, MD4, and MD5	http://www.rsa.com/rsalabs/node.asp?id=2253	MD2, MD4, and MD5 are message-digest algorithms that are meant for digital signature applications where a large message has to be compressed in a secure manner before being signed with the private key. All three algorithms take a message of arbitrary length and produce a 128-bit message digest. Although the structures of these algorithms are somewhat similar, the design of MD2 is quite different from that of MD4 and MD5. MD2 is optimized for 8-bit machines, whereas MD4 and MD5 are aimed at 32-bit machines.
Moving Picture Experts Group	MPEG	http://www.chiariglione.org/mpeg/	MPEG is a set of standards for audio and video compression and transmission created and maintained by the ISO in 1988.
MPEG-1 Audio Layer 3	MP3	http://www.chiariglione.org/mpeg/	MP3 is an audio-specific format that was designed by the Moving Picture Experts Group as part of its MPEG-1 standard. It uses a compression algorithm that is designed to greatly reduce the amount of data required to represent the audio recording and still sound like a faithful reproduction of the original uncompressed audio for most listeners. MP3 is an ISO/IEC standard.
Multidimensional eXpressions	MDX	http://www.microsoft.com/msj/0899/mdx/mdx.aspx	MDX language provides a specialized syntax for querying and manipulating the multidimensional data stored in OLAP cubes.
Object Linking and Embedding Database	OLE DB	http://msdn.microsoft.com/en-us/library/ms722784%28VS.85%29.aspx	OLE DB is a set of COM-based interfaces that expose data from a variety of sources. OLE DB interfaces provide applications with uniform access to data stored in diverse information sources or data stores.
OLE DB for OLAP	ODBO	http://www.xmla.org/odbo.htm	ODBO is a Microsoft published specification and an industry standard for multi-dimensional data processing.
Open Database Connectivity	ODBC	http://msdn.microsoft.com/en-us/library/ms710252%28VS.85%29.aspx	ODBC is a C programming language interface that makes it possible for applications to access data from a variety of database management systems. ODBC is a low-level, high-performance interface that is designed specifically for relational data stores.

Standard	Acronym	Link	Explanation
Open Grid Forum	OGF	http://www.ogf.org/	OGF is a worldwide community of users, developers, and vendors involved in the global standardization effort for grid computing. OGF was formed in 2006 from the merger of the Global Grid Forum and the Enterprise Grid Alliance and has created standards such as the Open Grid Services Architecture (OGSA), the Open Grid Services Infrastructure (OGSI), and the Job Submission Description Language.
Open System Interconnection Reference Model	OSI	http://www.iso.org/iso/home.htm	OSI is an effort to standardize networking. It was started in 1977 by the International Organization for Standardization (ISO) and is an abstract description for layered communications and computer network protocol design.
OSGi	OSGi	http://www.osgi.org/Main/HomePage	The OSGi Alliance is a worldwide consortium of technology innovators that advances a proven and mature process to assure interoperability of applications and services based on its component integration platform.
Hypertext Preprocessor	PHP	http://www.php.net/	PHP is a widely used open source general-purpose scripting language that is especially suited for web development and can be embedded into HTML.
Peer to Peer Remote Copy	PPRC	http://www.redbooks.ibm.com/abstracts/sg246568.html?Open	Also known as Metro Mirror, PPRC is a protocol used to synchronously replicate a storage volume to another control unit in a remote site. It is designed to support replication at metropolitan distances of approximately less than 300 km.
Portable Document Format	PDF	http://www.adobe.com/products/acrobat/adobepdf.html	PDF is a file format created by Adobe Systems for document exchange. PDF represents two-dimensional documents in a manner independent of the application software, hardware, and operating system.
Radio Frequency Identification	RFID	http://www.rfidjournal.com	RFID, dating back to the 1970s, is a method of identifying unique items using radio waves. In an RFID scenario, a reader communicates with a tag, which holds digital information in a microchip.
Really Simple Syndication	RSS	http://developer.mozilla.org/en/docs/RSS:Getting_Started:What_is_RSS	RSS is an XML-based markup language used for feeds also known as syndication. RSS syndication is used for the syndication of websites, Internet radio, or Internet television.
Representational State Transfer	REST	http://www.ics.uci.edu/~fielding/pubs/dissertation/top.htm	REST is a term typically used to describe an interface that is simpler than Web services to transmit domain-specific data over HTTP. It is considered simpler because it can do it without an additional messaging layer such as SOAP or session tracking via HTTP cookies.
Secure Socket Layer/Transport Layer Security	SSL/TSL	http://tools.ietf.org/html/rfc2246	SSL/TSL are protocols to encrypt the communication channel over the Internet between communicating parties to ensure privacy and security. It is used by a variety of applications such as e-mail or Web browsing.

Standard	Acronym	Link	Explanation
Security Assertion Markup Language	SAML	http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=security	SAML is an XML-based framework for communicating user authentication, entitlement, and attribute information. SAML allows business entities to make assertions regarding the identity, attributes, and entitlements of a subject (an entity that is often a human user) to other entities, such as a partner company or another enterprise application.
Small Computer System Interface	SCSI	http://www.incits.org/	SCSI is a set of standards for physically connecting and transferring data between computers and peripheral devices.
Service Provisioning Markup Language	SMPL	http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=provision	SMPL is an XML-based framework, being developed by OASIS, for exchanging user, resource, and service provisioning information between cooperating organizations. SMPL is the open standard for the integration and interoperation of service provisioning requests.
Simple Object Access Protocol	SOAP	http://www.w3.org/TR/2000/NOTE-SOAP-20000508/	SOAP is a simple XML-based protocol that lets applications exchange information over HTTP. SOAP is a protocol to exchange information in a decentralized, distributed environment. It is often used when implementing Web services.
Structured Query Language	SQL	http://www.cbi.umn.edu/oh/display.phtml?id=317	SQL is a computer language designed for managing data in Relational Database Management Systems (RDBMS) and originally based upon a Relational Algebra.
Society for Worldwide Interbank Financial Telecommunication	SWIFT	http://www.swift.com/	SWIFT is a member-owned cooperative through which the financial world conducts its business operations with speed, certainty, and confidence. SWIFT enables its customers to automate and standardize financial transactions, thereby lowering their costs, reducing their operational risk, and eliminating inefficiencies from their business operations. SWIFT provides the proprietary communications platform, products, and services, which enables banks and financial institutions to connect and exchange financial information securely and reliably. It also acts as the catalyst that brings the financial community together to work collaboratively to define standards.
SQL-based extensions for XML	SQL/XML	http://sqlxml.org/	SQL/XML is an extension to the SQL standard that is defined by ISO/IEC 9075-14:2003 and specifies SQL-based extensions for using XML in conjunction with SQL. SQL/XML introduces the XML data type and several routines, functions, and XML-to-SQL data type mappings to support manipulation and storage of XML in a SQL database.
Supervisory Control and Data Acquisition	SCADA	http://www.scadametrics.com/PDF/Specs_Master_Meter_SCADA_001.pdf	SCADA establishes a framework to monitor, control, and alarm plant or regional operating systems from a central location. SCADA usually refers to centralized systems that monitor and control entire sites, or complexes of systems spread out over large areas (anything between an industrial plant and a country).

Standard	Acronym	Link	Explanation
The Kerberos Network Authentication Service	Kerberos	http://gost.isi.edu/publications/kerberos-neuman-tso.html	The Kerberos service is a distributed authentication service that enables a process (a client) to run on behalf of a principal (a user) to prove its identity to a verifier (an application server, or just server). This is done without the need to send data across the network that might enable an attacker or the verifier to compromise the principal.
The Open Group Architecture Framework	TOGAF	http://www.opengroup.org/togaf/	TOGAF is a detailed method and set of supporting resources for developing an Enterprise Architecture that has been developed and endorsed by the Architecture Forum of The Open Group. TOGAF provides an industry framework and tools to create a detailed plan of the Enterprise Architecture at the component level to guide its implementation.
Triple Data Encryption Standard	TDES	http://www.ii.uib.no/~osvik/des/fips46-3.pdf	TDES is a cryptographic Data Encryption Standard (DES) that uses three keys. This method is usually used by governments to prevent unauthorized disclosure or undetected modification during transmission or while in storage to protect data that is considered sensitive by the responsible authority.
Two-phase commit protocol	2PC	http://ei.cs.vt.edu/~cs5204/sp99/distributedDBMS/duckett/tpcp.html	2PC is a distributed algorithm that coordinates all the processes that participate in a distributed atomic transaction. The protocol results in a two-step approach (hence the name) in all nodes committing the transaction or aborting it (rolling back).
Universal Description, Discovery, and Integration	UDDI	http://uddi.xml.org/	UDDI is an open industry initiative, sponsored by the Organization for the Advancement of Structured Information Standards (OASIS), enabling businesses to publish service listings, discover each other, and define how the services interact over the Internet. UDDI is platform-independent and is based on XML.
Unstructured Information Management Architecture	UIMA	http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=uima	UIMA is an open, standards-based, scalable and extensible platform for building analytic applications or search solutions that process text or other unstructured information to find the latent meaning, relationships, and relevant facts buried within text.
Utility Communications Architecture	UCA	http://www.uci-usa.com/Projects/pr_List/Systems/Architecture/UCA.html	UCA is the result of work sponsored by the Electric Power Research Institute (EPRI). The specification consists of two communication models. The first one is based on the seven-layer Open System Interconnect (OSI) reference model. The second model consists of the first, second, and seventh layers of the OSI. The three-layer model is intended to address the unique requirements of the real-time control and data acquisition devices in power distribution applications within process plants and substations. It standardizes communications among the various components of energy and utility industries operations.

Standard	Acronym	Link	Explanation
Waveform Audio File Format	WAV	https://ccrma.stanford.edu/courses/422/projects/WaveFormat/	WAV is a standard for storing audio files developed by Microsoft and IBM. It is the main format used on Windows system to store raw, uncompressed audio.
Web 2.0		http://www.web2summit.com/web2009	Web 2.0 is associated with Tim O'Reilly because of the O'Reilly Media Web 2.0 conference in 2004. Although the term suggests a new version of the Web, it does not refer to an update to any technical specifications, but rather to cumulative changes in the ways software developers and end-users use the Web. It indicates how web development and web design facilitates interactive information sharing, interoperability, user-centered design, and collaboration on the Web.
Web Service Description Language	WSDL	http://www.w3.org/TR/wsdl	WSDL is a specification describing an XML-based language for specifying the interfaces of Web services.
Web Services Addressing	WS-Address-ing	http://www.w3.org/2002/ws/addr/	WS-Addressing is a W3C specification that provides transport-neutral mechanisms to address Web services and messages. This specification enables messaging systems to support message transmission through networks in a transport-neutral manner where the networks might include processing nodes such as endpoint managers, firewalls, and gateways.
Web Services Choreography Definition Language	WS-CDL	http://www.w3.org/TR/ws-cdl-10/	WS-CDL is an XML-based language that describes how Web services collaborate.
Web Services Policy	WS-Policy	http://www.w3.org/TR/ws-policy-primer/	WS-Policy defines policies that are in a machine-readable language for representing the capabilities and requirements of a Web service. WS-Policy is used to represent consistent combinations of capabilities and requirements, whether or not policies are compatible, and to associate policies with Web service metadata constructs, such as service, endpoint, and operation.
Web Services Security Policy Language	WS-Security Policy	http://specs.xmlsoap.org/ws/2005/07/securitypolicy/ws-securitypolicy.pdf	WS-Security Policy defines policy assertions that are utilized by the WS-Security, WS-Trust, and WS-Secure Conversation specifications.
Web Services Security SOAP Message Security	WS-Security	http://www.oasis-open.org/committees/download.php/6367/oasis-200401-wss-soap-message-security-1.0.pdf	An extension to SOAP to apply security to Web services, the WS-Security specification describes enhancements to SOAP messaging to provide message integrity and confidentiality. The specified mechanisms can be used to accommodate a wide variety of security models and encryption technologies such as SAML, Kerberos, and X.509. This specification also provides a general-purpose mechanism for associating security tokens with message content.

Standard	Acronym	Link	Explanation
Web Services Trust	WS-Trust	http://docs.oasis-open.org/ ws-sx/ws-trust/200512/ ws-trust-1.3-os.html	WS-Trust, a standard also defined by OASIS, uses the messaging mechanisms of WS-Security to define additional extensions for the issuance, exchange, and validation of security tokens. WS-Trust also enables the issuance and dissemination of credentials within different trust domains. Furthermore, WS-Trust provides methods to establish and assess the presence of broker trust relationships between participants in a secure message exchange.
Web Services-Management	WS-Management	http://www.dmtf.org/ standards/wbem/wsman	WS-Management addresses the cost and complexity of IT management. This is done by providing a common way for systems to access and exchange management information across the entire IT infrastructure.
Worldwide Interoperability for Microwave Access	WiMAX	http://www.wimaxforum. org/	WiMAX is a standards-based technology to deliver wireless broadband data over long distances. It is based on the IEEE 802.16 standards and created by the WiMAX Forum, which was formed in June 2001 to promote conformity and interoperability of the standard.
XA Compliance	XA	https://www.opengroup.org /online-pubs?DOC= 9698909699&FORM=PDF	XA indicates that a transactional system complies with the X/Open XA Standard for distributed transaction processing. The XA Standard is in essence also a 2-phase commit protocol defined by The Open Group. For example, an XA-compliant driver gives you the facility to use all JDBC Core API in distributed mode, the same way as in local transaction (non-XA mode). The XA standard describes an interface between the global transaction manager and the local resource manager.
XML for Analysis	XMLA	http://www.xmla.org/	XMLA is a standard that enables client applications to talk to multi-dimensional or OLAP data sources. The standard contains the specification for a set of XML message interfaces that use the industry standard SOAP to define data access interaction between a client application and an analytical data provider working over the Internet.
XML Path Language	XPATH	http://www.w3.org/TR/ xpath	XPATH is a language for addressing parts of an XML document, designed to be used by both XSLT and XPointer.
XML Query Language	XQUERY	http://www.w3.org/TR/ xquery/	XQUERY is a query and functional programming language that is designed to query collections of XML data.
XML Schema Definition	XSD	http://www.w3.org/XML/ Schema	The XSD standard is the metadata language for XML documents. It specifies how to describe the elements in an XML document. This description can be used to verify that each item of content in a document adheres to the description of the element in which the content is to be placed.