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## Appendix A: Analysis Mechanisms

From "[Capturing Architectural Requirements](#)"

by Peter Eeles

Consider the following analysis mechanisms when gathering architectural requirements.

Analysis Mechanism	Description
<b>Auditing</b>	Provides audit trails of system execution.
<b>Communication</b>	Allows distributed processes to communicate.
<b>Debugging</b>	Provides elements to support application debugging.
<b>Error Management</b>	Allows errors to be detected, propagated, and reported.
<b>Event Management</b>	Supports the use of asynchronous messages within a system.
<b>File Management</b>	Provides services for accessing a file system.
<b>Graphics</b>	Supports user interface services, such as 3D rendering.
<b>Information Exchange</b>	Supports data format conversion.
<b>Licensing</b>	Provides services for acquiring, installing, tracking, and monitoring license usage.
<b>Localization</b>	Provides facilities for supporting multiple human languages.
<b>Mail</b>	Services that allow applications to send and receive mail.
<b>Mega-data</b>	Support for handling large amounts of data in a client-server environment.
<b>Memory Management</b>	Services for abstracting how memory is allocated and freed.
<b>Meta-data</b>	Supports the runtime introspection of components.
<b>Online help</b>	Provides online help capability.
<b>Persistence</b>	Services to manipulate persistent data.
<b>Printing</b>	Provides facilities for printing.
<b>Process Management</b>	Provides support for the management of processes and threads.
<b>Reporting</b>	Provides reporting facilities.

<b>Resource Management</b>	Provides support for the management of expensive resources, such as database connections.
<b>Scheduling</b>	Provides scheduling capability.
<b>Security</b>	Provides services to protect access to certain resources or information.
<b>System Management</b>	Services that facilitate management of applications in a distributed environment.
<b>Time</b>	Services to synchronize time on a network, and to translate times into different time zones.
<b>Transaction Management</b>	A mechanism for handling ACID <sup>1</sup> transactions.
<b>Workflow</b>	Support for the movement of documents and other items of work, typically through an organization.

<sup>1</sup> The acronym ACID refers to four characteristics of a transaction: Atomic, Consistent, Isolated and Durable.



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