Enterprise Infrastructure vs. Enterprise Integration Architecture Standards


IS Architecture Development

- On-going process ≠ one time planning exercise
- Two different sets of IS decisions
  - Infrastructure architecture
    - concerns computer and communications/network operations and infrastructure planning activities
    - Standards
  - Integration architecture
    - focused on systems development, including application planning, software acquisition and maintenance
Table 1. Key differences between the infrastructure and integration architecture standards

<table>
<thead>
<tr>
<th></th>
<th>Infrastructure Architecture</th>
<th>Integration Architecture</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Focus</strong></td>
<td>Providing common IT platforms, networks, and computing resources</td>
<td>Providing interfaces into and integration of business unit capabilities and information</td>
</tr>
<tr>
<td><strong>Scope</strong></td>
<td>Wide and heterogeneous community of users, or entire enterprise</td>
<td>For a limited and focused set of business services, prioritized by business value</td>
</tr>
<tr>
<td><strong>Key metrics</strong></td>
<td>Efficiency, cost</td>
<td>Cost and enablement of new business capabilities</td>
</tr>
<tr>
<td><strong>Driver (champion) within organization</strong></td>
<td>IT organization (at CIO/CTO level)</td>
<td>Corporate sponsorship for enterprise integration, executive sponsorship within each business unit</td>
</tr>
<tr>
<td><strong>Comparable model</strong></td>
<td>Public infrastructure provided by government</td>
<td>Business contracting</td>
</tr>
</tbody>
</table>

**Infrastructure architecture standards and policies**

- created to define the computing technology infrastructure for the enterprise.
- It establishes technology standards to limit technology choice, to reduce the number of platforms supported, and to define a set of computing resources that organizations manage.
- This standardization is expected to significantly reduce the number of vendor packages and infrastructure services that perform similar functions (Ross, 2003).
Integration Architecture Standards

- refers to the standards and policies created to define the means by which business services, events and information are defined and accessed by the enterprise.
- It consists of a set of architectural components, such as data, processes, and event models, application architecture and service-oriented architectures (Brown, Johnston, and Kelly, 2003)
- that specify how different data, processes, and applications relate to each other across the enterprise.

As the integration architecture matures and is more completely defined...

- the enterprise evolves from an application programming interface (API) based integration model to an integration model that leverages shared data and services across different applications.
  - Programming an interface for each application system that needs to interact with another system may solve the short-term transaction processing and data integration problem, but it becomes cumbersome to manage as the number of applications and the number of interfaces between the applications increases exponentially.
  - But an integration model that leverages shared data and services across different applications would define set of data and services that is common across different business processes.
    - This would allow the organization to have better integration of data and transaction processing in the long term and better ability to scale its operations and support new functionality as the number of applications and functions required increase.