



Cloud Computing (CS60118)

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Introduction

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CLOUD COMPUTING

IN

INDUSTRY

Introduction

- Cloud adoption is a growing reality across the industries. This calls for a fundamental paradigm shift in how business models and IT services are planned, built, and orchestrated. Bundling IT services into highly standardized packages and the industrialization of IT will lead to the next level of operational excellence with a direct impact on manufacturing business models.
- Cloud computing offers innumerable opportunities for manufacturers to enter new markets and to enhance customer satisfaction.
- New developments in products and services such as cloud-managed tools, home appliances, and other smart devices are only the first steps towards cloud-based business models.
- In short, successful manufacturing companies strive to increase customer value and gain a competitive advantage by enriching existing products with cloud services.

Cloud Deployment in Industries

- Cloud Computing offers innumerable opportunities for manufacturers to enter new markets and to enhance customer satisfaction.
- The industries is now and will remain highly affected by the digital transformation. Companies affected by new digital trends are faced with increasing demands for new products and services that cannot be completely met by the company's existing IT.
- In order to benefit from cloud computing, expand markets, and defend existing ones, IT departments will be responsible for the operation and support of cloud services as well as enabling IoT business in the foreseeable future.

Cloud Deployment in Industries

- Manufacturers will have to define a clear and consistent cloud strategy with publicly and privately available cloud services in order to be able to act appropriately as a cloud provider and/or consumer.
- In addition, the orchestration (integration) of various deployment models required to provide a consistent appearance to consumers places the IT department in the role of a cloud broker.
- A cloud broker as an entity manages the use, performance, and delivery of cloud services and negotiates relationships between cloud providers and cloud consumers

Cloud Deployment in Industries

Cloud provider strategy

- As a cloud provider, the manufacturing company's IT department has to handle both the private cloud services for own business as well as public cloud services for consumers and other users.
- As a first step, the manufacturer should start the cloud journey by providing cloud services from a private cloud to the company's internal IT consumers/business units.
- At this stage, it As a second step, the manufacturing companies may extend their existing private cloud to a hybrid cloud by integrating it with one or more public clouds.
- Cloud services can be developed in the private cloud and then extended to the customers and (business) partners via the public cloud

Cloud Deployment in Industries

Cloud consumer strategy

- Many industries are still relying on legacy IT systems and private cloud services rather than public cloud services.
- Use of public or hybrid clouds should be addressed in the IT or cloud strategy in gaining benefits from the use of cloud services such as increased agility, decreased time-to-market or flexible costing.
- However, as a minimum the company's general compliance and security guidelines have to be enforced in cases where public cloud services are unavoidable.

Cloud Benefits in Industries

- Affordable data storage solutions
- Flexibility
- Data Security
- Backup and Recovery
- Automated Upgrades
- Enhanced Customer Support
- Scalability
- Data accessibility
- Low Maintenance
- Information is always available, even with different geographical locations

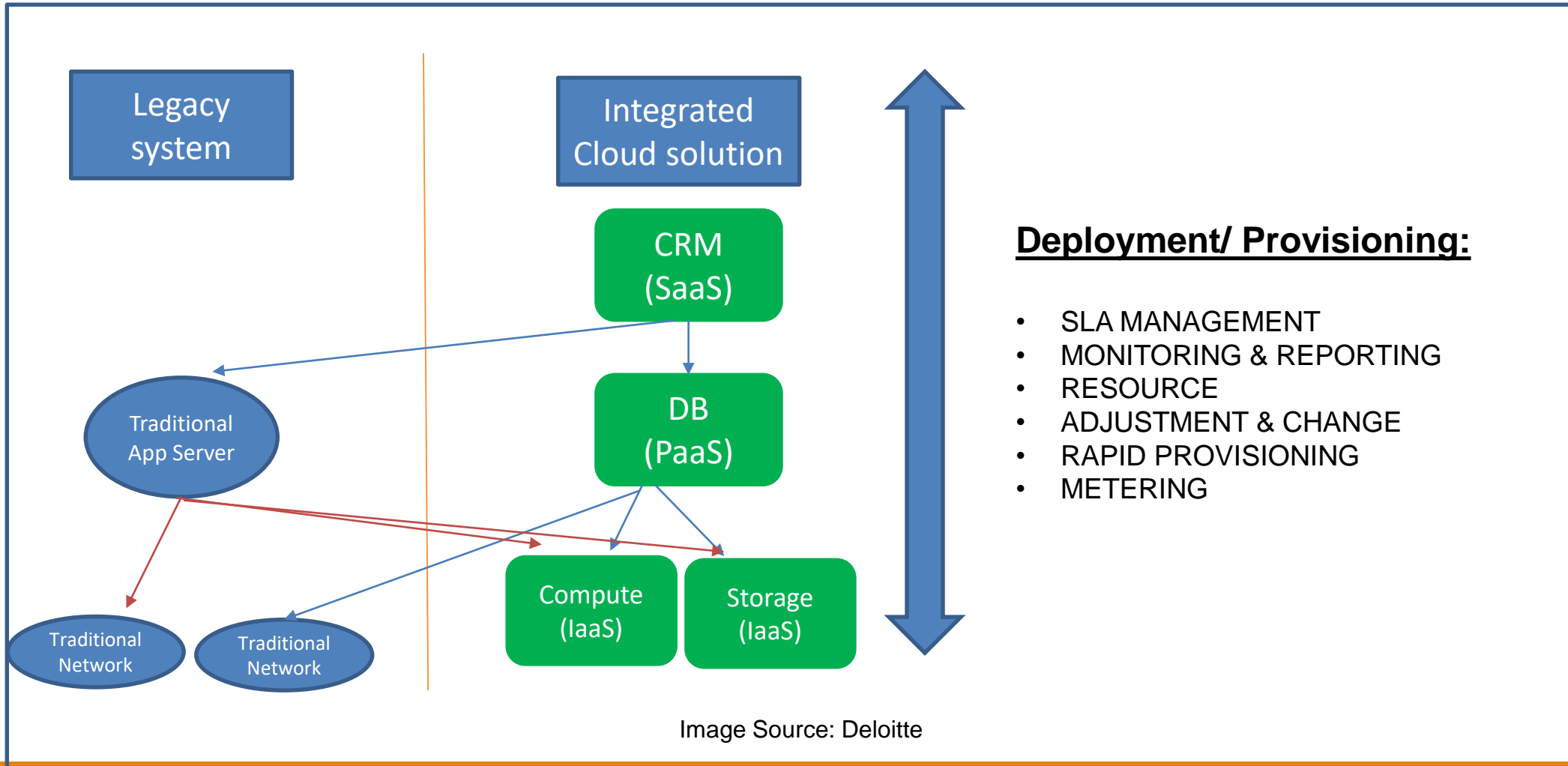
Cloud Disadvantage in Industries

- NETWORK CONNECTION DEPENDENCY
- LOSS OF CONTROL
- SECURITY
- Sharing company secrets with third party.
- **Downtime.** Downtime can lead to lost customers, data failure, and lost revenue.
- **Vendor Lock-In.** This is big issue. Although most cloud service providers assure that it is a breeze to use the cloud and integrate your business needs with them, disengaging and moving to the next vendor is still a huge problem.
- Limited Control and Flexibility

Cloud Orchestration

- **Cloud orchestration** Combination of IT or cloud services from multiple system components, which can be IT resources (e.g., technologies such as OS, middleware) or other cloud services.
- A company needs to set up a governance unit for the arrangement, coordination, and management of cloud and dependent non-cloud IT resources.
- To build, offer, and maintain orchestrated cloud services, the IT department has to take the role of a central provider and broker.

Cloud Orchestration



Cloud Orchestration

- No cloud service may be integrated into the corporate IT environment without the explicit involvement of the IT department. The company's management team must empower the IT department to:
 - Enforce cloud governance,
 - Set standards,
 - Evaluate and determine solutions for the cloud,
 - Remain responsible for architecture management, IT service management, supplier management, and compliance.

- As a broker of cloud services, the IT department has to ensure strict adherence to compliance guidelines for all cloud services consumed by the company and its subdivisions.

Conclusion

- In Industry use and implement more and more cloud offerings, IT organizations need to have a clear vision for the cloud journey in order to realize future manufacturing business models as well as to maintain and further build up their competitive advantage.
- IT departments must address the question of how to handle private and public clouds as well as how to integrate them into a hybrid cloud. They are to be encouraged to develop a comprehensive cloud strategy to ensure that the cloud activities support the business goals and focus on gaining the maximum business value from the incorporation of cloud services into the enterprise environment.
- Cloud strategy must ensure focus on gaining the maximum business value from the incorporation of cloud services into the enterprise environment.

References

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