

클라우드 컴퓨팅 Cloud Computing

클라우드컴퓨팅 개요
2023. Spring
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클라우드컴퓨팅

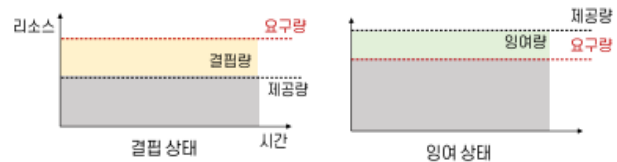
(4주-2) 강의

2023년 3월 27일

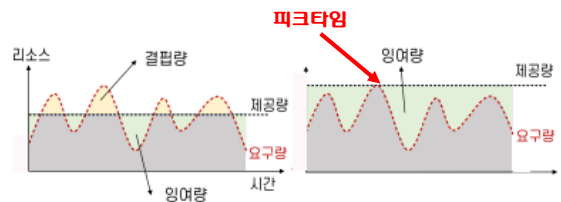
온프레미스 시스템 구축과정

• 리소스 요구량의 결핍과 잉여 상태

- 결핍(deficit)
- 잉여(surplus)



• 유동적 요구량과 피크타임 기준 제공량



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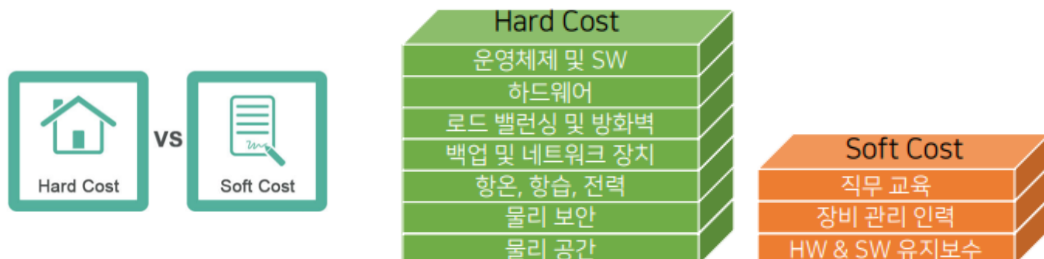
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온프레미스 시스템 구축과정

• 온프레미스 시스템 구축 및 운영 비용

- 직접비용(Hard Cost): 초기비용, 장비 도입 비용
- 간접비용(Soft Cost): 유지비용, 장비 유지 비용



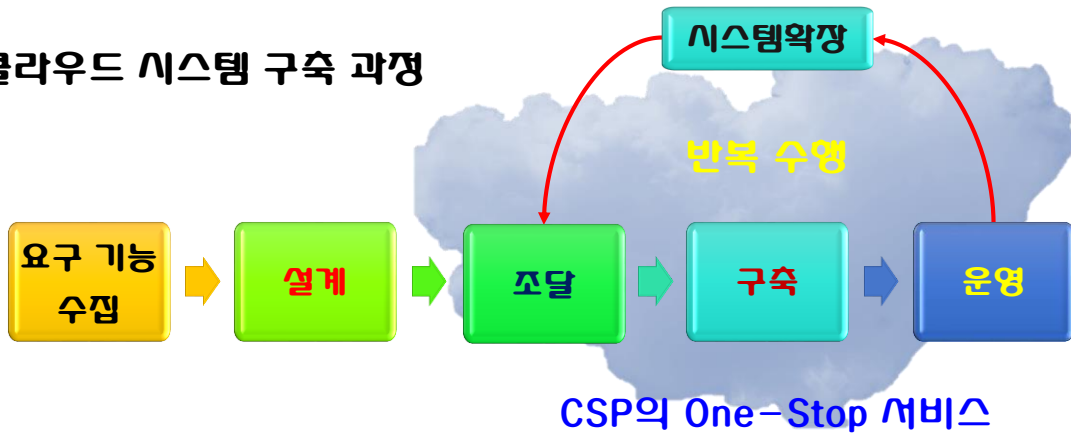
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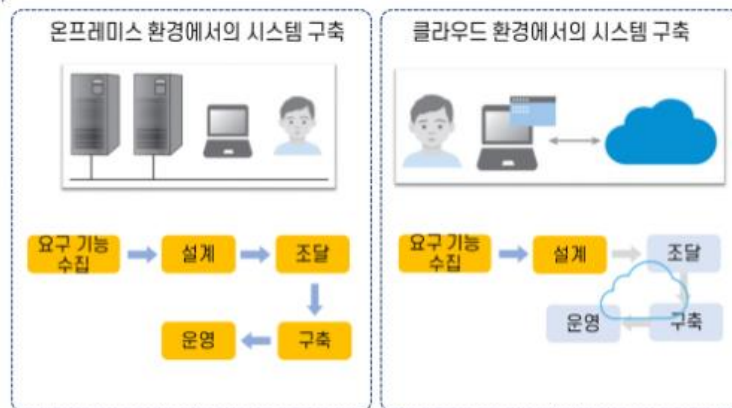
클라우드 시스템 구축

클라우드 시스템 구축 과정



클라우드 기반 시스템 구축

• 온프레미스와 클라우드 시스템 구축 단계 비교



클라우드 서비스 계약 관련 용어: SLA



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클라우드 서비스 계약 관련 용어: SLA

- 서비스 수준 계약(SLA: service-level agreement)
 - 서비스 제공자와 고객 간의 문서화된 계약
 - A contract between a provider and the end user that states the level of service
 - 사용자에게 제공하는 서비스 수준을 정량화 함
 - 미달되면 손해 배상을 위한 서비스 품질 보장 계약

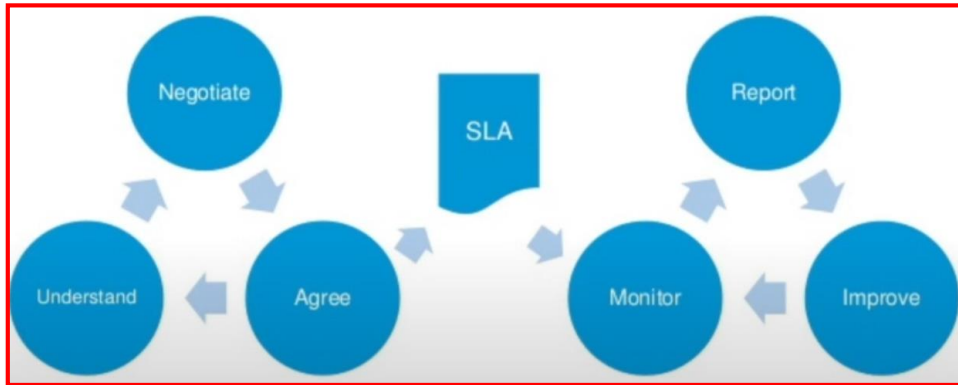
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클라우드 서비스 계약 관련 용어: SLA

• Two Cycles of SLA

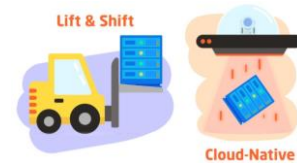


시스템 비용 비교: On-Premise vs. Cloud

- 자본지출(CapEx: **C**apital **E**xpense)
 - 물리적 인프라에 대한 초기 비용 지출
 - 감가상각에 의한 인프라 가치 감소되는 초기 비용
 - 온프레미스
- 운영지출(OpEx: **O**perational **E**xpense)
 - 연재 서비스 또는 제품에 대한 균등 청구 비용
 - 사용 연도에 균등 공제 비용
 - 클라우드

시스템 비용 비교: Cloud Migration

- 클라우드의 구축 비용 형태
 - IT 자원 사용 비용을 CapEx에서 OpEx으로 전환
- Cloud Migration
 - moving applications and data from an on-premise server to a cloud infrastructure
 - from legacy infrastructure to a cloud platform
 - either a full transition or partial



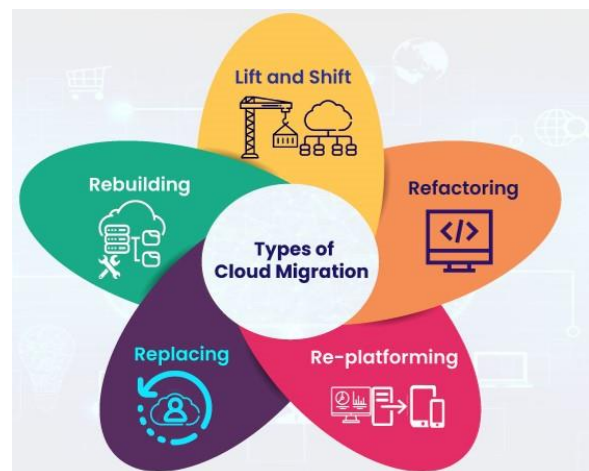
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Types of Cloud Migration

- Lift and Shift(Rehosting)
 - 앱 수정이나 재설계 없이 앱과 앱에 저장된 데이터를 클라우드 플랫폼으로 이전
- Rebuilding
 - 클라우드 환경과 호환되도록 응용 코드를 다시 작성
- Replacing
 - 응용이 클라우드 환경에 맞지 않아 구조적으로 재구축이나 수정 불가할 때



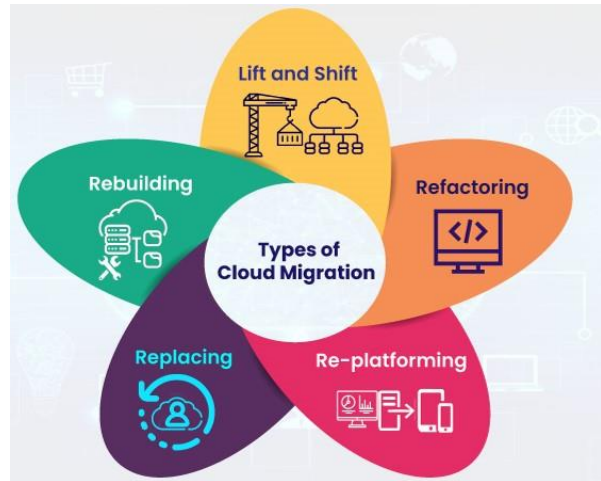
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Types of Cloud Migration

- Re-platforming
 - 업무응용이 클라우드와 맞지 않거나 혁신적 앱 개선 시
- Refactoring(Rearchitect)
 - 소프트웨어를 수정하고 코드의 주요 부분을 다시 작성하는 재설계 프로세스 후 애플리케이션을 클라우드로 이동



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시스템 비용 비교: Cloud Migration

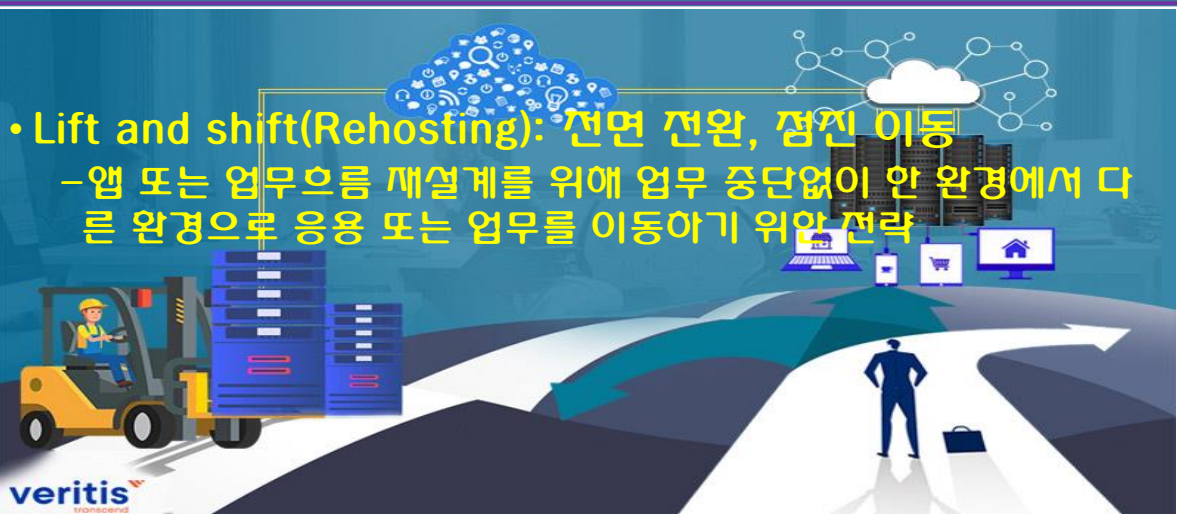


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시스템 비용 비교: Cloud Migration



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Cloud Vs On-Premise: IT Infrastructure Model of Your Choice?

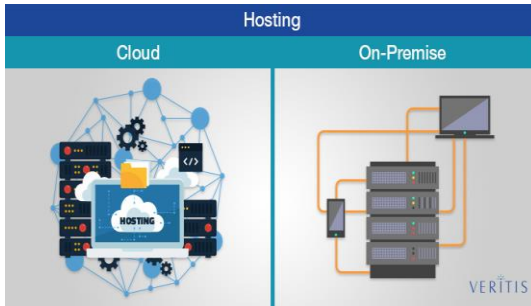


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Cloud Vs On-Premise: IT Infrastructure Model of Your Choice?



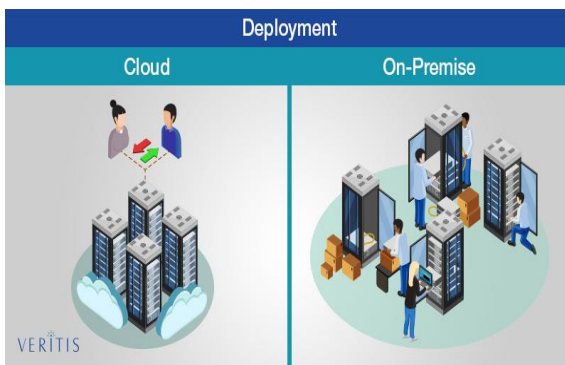
Key Factors	Cloud	On-Premise
Server Location	Third-party Cloud	Physical, On-premises
Maintenance	Off-site	On-site
Server Blackouts	Possible but Scalable	Possible
On-Demand	Easily Scalable	Consumes Time and Effort

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Cloud Vs On-Premise: IT Infrastructure Model of Your Choice?



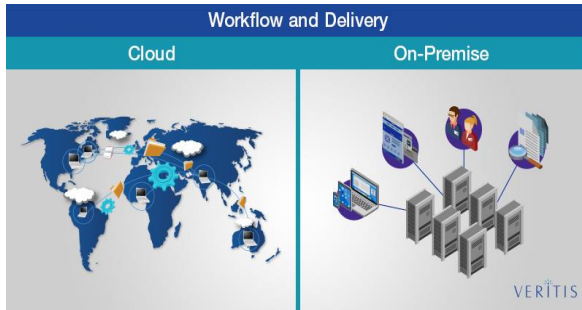
Key Factors	Cloud	On-Premise
Installation	Easy and fast	Time-consuming
Availability	On-demand	When bought and deployed
Investment	Less	High
Business Risks	Low	High

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Cloud Vs On-Premise: IT Infrastructure Model of Your Choice?



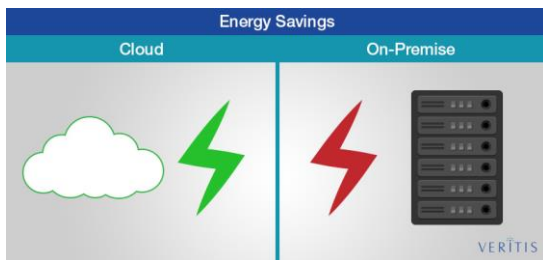
Key Factors	Cloud	On-Premise
Unlimited Memory	Yes	No
Back-up	Timely	Effort-intensive
Rate of Application Launch and Deployment	High	Low
Ability to handling workloads	High	Low
Process Delivery	Smooth	Chances of interruption

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Cloud Vs On-Premise: IT Infrastructure Model of Your Choice?



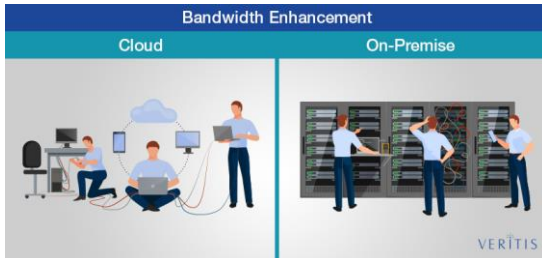
Key Factors	Cloud	On-Premise
Energy Savings	Comes part of a package	To be managed individually
Cost-Savings	High	Low
Scope for SMEs	High	Low
Scope for Corporates	High	Low
Maintenance Burden	Taken care of by CSP	Enterprise's responsibility

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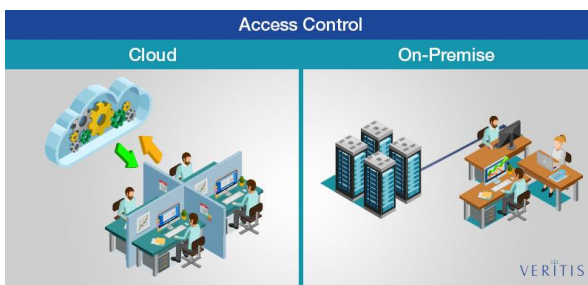
Key Factors	Cloud	On-Premise
Bandwidth Enhancement	On-demand	Demands new deployments
Hardware	CSP's responsibility	Organization's responsibility
Configurations	Standard	Customizable

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Cloud Vs On-Premise: IT Infrastructure Model of Your Choice?



Key Factors	Cloud	On-Premise
Malware Removal	Easy	Difficult
공격 취약성	Yes	Yes
Responsibility of failure	CSP	Organization

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