

















L1.10













































TRANSPARENCY PROPERTIES OF DISTRIBUTED SYSTEMS

- Access transparency: local and remote objects accessed using identical operations
- Location transparency: objects accessed w/o knowledge of their location.
- Concurrency transparency: several processes run concurrently using shared objects w/o interference among them
 Replication transparency: multiple instances of objects increase
- Replication transparency: multiple instances of objects increase reliability without the knowledge of users or applications
 Eailyte transparency, encodement of faults
- Failure transparency: concealment of faults
 Migration transparency: information objects are moved w/o affecting operations performed on them
- Performance transparency: system can be reconfigured based on load and quality of service requirements
- Scaling transparency: system and applications can scale w/o change in system structure and w/o affecting applications

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L1.42



























































HORIZONTAL VS VERTICAL SCALING		
Horizontal Scaling	Vertical Scaling	
Less expensive using commodity HW	Requires expensive high capacity servers	
IT resources instantly available	IT resources typically instantly available	
Resource replication and automated scaling	Additional setup is normally needed	
Additional servers required	No additional servers required	
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HORIZONTAL VS VERTICAL SCALING		
Horizontal Scaling	Vertical Scaling	
Less expensive using commodity H	W Requires expensive high capacity servers	
IT resources instantly available	IT resources typically instantly available	
Resource replication and automated scaling	Additional setup is normally needed	
Additional servers required	No additional servers required	
Not limited by individual server capa	city Limited by individual server capacity	
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