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"Cloud com	nputing is a specialized form of		
distributed	computing that introduces utilization		
models for	remotely provisioning scalable and		
measured re	sources."		
From Cloud Com	outing Concepts, Technology, and Architecture		
Z. Mahmood, R. I	Puttini, Prentice Hall, 5 <sup>th</sup> printing, 2015		
October 2, 2019	TCSS562: Software Engineering for Cloud Computing [Fall 2019]       L3.31         School of Engineering and Technology, University of Washington - Tacoma       L3.31		



























VIRTUALIZATION				
Virtual Machine	Virtual Machine OS Kernel Threads Processes Drivers Hypervis Hardware	Virtual Machine OS Kernel Threads Processes Drivers or	Virtual Machine OS Kernel Threads Drivers	
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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		
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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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