



Availability Modeling and Analysis of a VoD Service for Eucalyptus Platform

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Script

- Introduction
- Sections
- Case Study I
 - Non-redundancy architecture
- Case Study II
 - Redundant architecture
- Case Study III
 - Cost Analysis
- Results

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Introduction



www.cloudflix.cin.br



Sections



Case Study - I

Case Study - II

Case Study - III

1. Definition of the baseline;
2. Modeling;
3. Reach values of dependability;
4. Model Validation.



Sections



Case Study - I

Case Study - II

Case Study - III

1. Sensitivity analysis;
2. Redundant architecture;
3. Modeling;
4. Recalculate dependability results.

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Sections



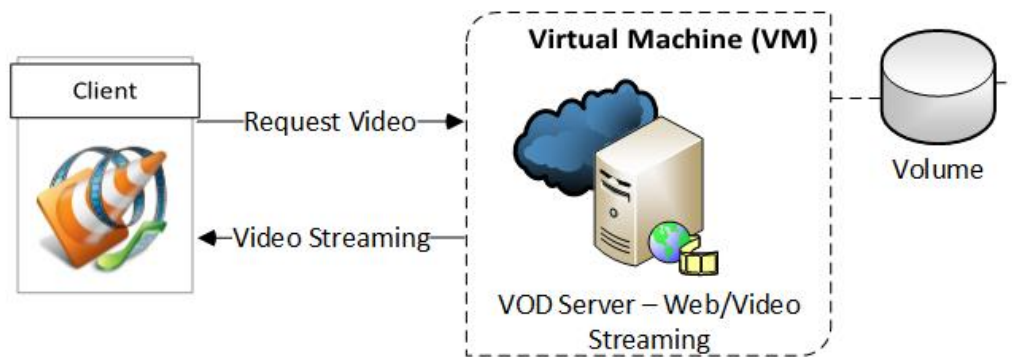
Case Study - I

Case Study - II

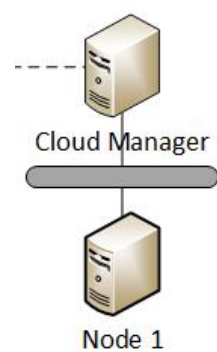
Case Study - III

1. Sensitivity analysis;
2. Redundant architecture;
3. Recalculate dependability results;
4. Cost Analysis.

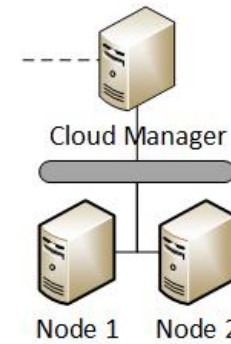
Case Studies



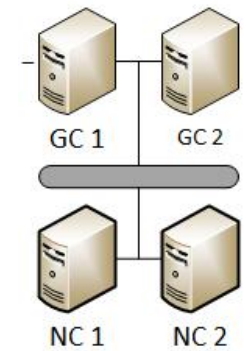
Baseline



Redundant I



Redundant II



Case Studies

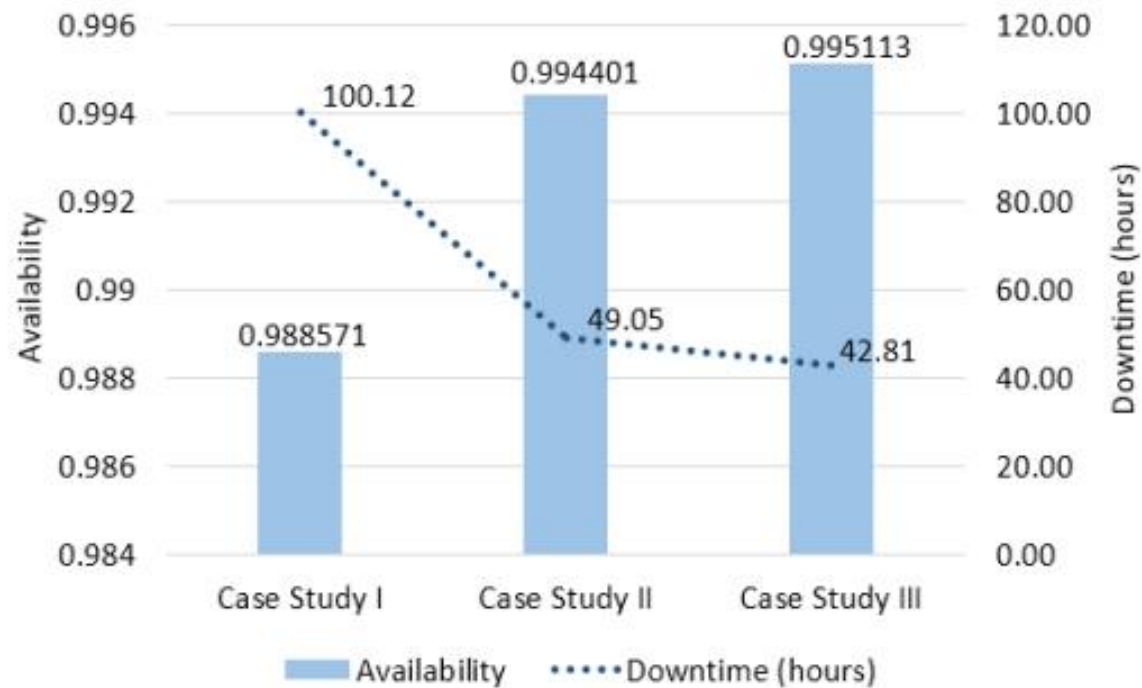


Figure 12: Case studies comparison.

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Case Study III



SELF-SERVICE PLATFORM FOR LIVE STREAMING

	STARTER \$19 <i>Billed Annually or \$25 per month with 3 month commitment</i> Free Trial	PLUS \$79 <i>Billed Annually or \$99 month-to-month</i> Free Trial	PRO \$149 <i>Billed Annually or \$169 month-to-month</i> Free Trial	CUSTOM 855-896-9300 +33-174-307-746 Contact Us
Bandwidth	100GB	500GB	1000GB	Large audience for a recurring show? Frequent broadcaster of sports games? Contact us for custom pricing on monthly plans larger than the Pro level.
Viewer Hours*	300	1500	3000	
Storage	20GB	60GB	125GB	
Support	Email	Email	Phone	
Extra Bandwidth	\$0.25/GB	\$0.22/GB	\$0.18/GB	
Extra Storage	\$0.50/GB	\$0.30/GB	\$0.25/GB	



Case Study III

TABLE III: Memory capacity and number of users supported by each VM type

VM type	Users	Mem. Avail. (MB)	Mem. per User (MB)
m1.small	5	256	51.2
m1.medium	15	512	34.1
m1.large-512	15	512	34.1
m1.xlarge	36	1024	28.4

Case Study III

	vCPU	ECU	Memória (GiB)	Armazenamento da instância (GB)	Uso do Linux/UNIX
Uso geral – Geração atual					
<u>m3.medium</u>	1	3	3.75	1 x 4 SSD	\$0.095 por hora
<u>m3.large</u>	2	6.5	7.5	1 x 32 SSD	\$0.190 por hora
m3.xlarge	4	13	15	2 x 40 SSD	\$0.381 por hora
m3.2xlarge	8	26	30	2 x 80 SSD	\$0.761 por hora
Micro and Small Instances					
<u>t1.micro</u>	1	Variável	0.615	Somente EBS	\$0.027 por hora
m1.small	1	1	1.7	1 x 160	\$0.058 por hora

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Case Study III

	Não-redundante	Redundante - NC	Redundante - NC and GC	Redundante - Hot	
Tamanho VM	Micro	Medium	Large	xLarge	
Banda	10/1000	10/1000	10/1000	10/1000	
Availability	0,988571	0,994401	0,995113	0,995399	
Annual Downtime	100,11804	49,04724	42,81012	40,30476	
Custo	19,44	68,4	136,8	274,32	Margem de lucro
Margem de Lucro	0,486	1,71	3,42	6,858	2,50%
Preço do Serviço	19,926	70,11	140,22	281,178	
Preço do Serviço da DaCast	19	79	149	Variável	
Custo da Infraestrutura	\$ 1.869,69	\$ 2.746,30	\$ 4.459,68	R\$ 6.174,82	
Limite de Usuários	5	10	15	36	
Rentabilidade	5,0810%	25,5289%	47,1625%	163,9304%	
Prazo de Retorno	18,76636823	3,917136682	2,120327063	0,610014945	

Maria Clara - WMoDCS - November/2014.



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Questions?

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