1. Quelles sont les parties prenantes du SLA ?

- o Columbia University
- o Virtual Machine Hosting service “ Service”

2. Quels sont les sujets couverts par le SLA ?

The purpose of this SLA is to set expectations for the provision of the Service as it is defined herein with regard to:

- o Requirements for VMs that will be hosted
- o Criteria that will be used to measure the Service
- o Agreed service level targets that are the minimum performance requirement
- o Roles and responsibilities of CUIT and Client
- o Escalation contacts
- o Associated and supporting processes as well as any deviations

3. Quels sont les services couverts par le SLA et quelles sont la responsabilité respective de CUIT et des clients ?

This service is to host a virtual machine on CUIT’s converged infrastructure platform with one of the following systems:

- o VM with RHEL 6.x
- o VM with Windows Server 2008 R2

CUIT is responsible for maintaining the underlying hardware, network and storage to ensure the

service targets indicated below.

- o For a VM with RHEL or Windows OS installed, CUIT will manage up the OS layer.

The client is responsible for the support of the application residing on the virtual server.

4. Quels sont les objectifs de disponibilité pour les VMs ? Y a-t-il des fenêtres de maintenance programmées ?

The Service for hosting production instances will be available to Clients on a 24x7 basis except for

maintenance windows or other scheduled or application-specific maintenance outlined herein.

CUIT will strive to achieve a MTBF of 100 days at the minimum.

A failure is defined as any infrastructure-related incident causing the Service to be unavailable.

This can also include severe performance degradation

The target availability of VM Hosting is 99.9%

5. Quelles sont les dispositions prises en cas de sinistre ?

Service Continuity (Disaster Recovery) is hosted at a hot site at the NYSERNet facility in

Syracuse, New York. If a disaster is declared, the Service will be recovered at the alternate

location in the timescales outlined below based on how the application has been categorized.

CUIT's primary mission in the event of a disaster invocation is to recover all production

applications. Once complete, critical application processing will resume within a specified period of

time following the declaration of an emergency outage.

6. Sachant qu'une interruption de service de la plate-forme de formation en ligne

devrait être traitée avec de priorité de niveau « critique », en combien de temps

maximum CUIT devrait-il rétablir le service pour respecter le SLA ?

CUIT would resolve the situation 2h30 after the interruption.

7. Si un incident rendant la plateforme de formation en ligne indisponible se produisait

un jeudi soir à 23h. A quelle heure le service devrait-il être rétabli pour respecter le SLA ?

Friday 12:30pm

8. Reprenez le cours sur les sept niveaux de continuité d'activité. En vous basant sur ce

cours et sur le SLA, à quel niveau de continuité d'activité situez-vous le service

d'hébergement de VMs du CUIT ? Justifiez votre réponse.

Between 3-4 because depending on the time at which we get a non critical issue the time needed to correct it could end up longer than what it should

however the hot site and electronic vaulting reduce a lot of those risk.

9. En se basant uniquement sur ces indicateurs, le SLA de CUIT est-il plus ou moins favorable que celui de ISC ? Justifiez votre réponse

The only characteristic we can use to juxtapose ISC and CUIT is the disponibility of 99.9% targeted by CUIT meanwhile ISC aim for 99.5%

which end ups in a gap of 1 day 18h56m26.40 in favor of CUIT. However we also have to look at CUIT's RTO which is 2.5 times longer in best case scenario.

That is considering, for a critical priority the time needed to find a technician (maximum 30 minutes) with a 5% chance of not being able too and

be able to find a solution to the said problem in less than 2h with a failure rate of 20%. We can't use the RPO because CUIT use a different metric nevertheless

i would recommend using ISC because a varitation of 0.40% in disponibility seems less troublesome than waiting at least 2h30 and at most 80h during a failure especially

if those failures happend every 100 days.

10. Rédigez un email à Steve, en anglais de préférence (ou bien en français, mais c'est moins bien) dans lequel vous lui faites part de votre avis argumenté sur la capacité de CUIT à héberger la plateforme de formation en ligne.

Dear Mr.Steve,

I'm sending you this report in responce to your request asking for advice on the new Hosting Services. Therefore I'm going to summarize everything I got out of my investigation on CUIT and evaluate if a migration to it would be beneficial to us.

First of all, in terms of disponibility CUIT came ahead with a gap of 0.40% which would provide us with almost 2 more days of disponibility. However this advantage would come at a massive cost in terms of RTO since the time needed to resolve an issue differ a lot depending on who is affected by it: from 2h30 to 80h. Which is way more than our current 1h for every kinds of issue (I migth need more data on ISC in order to give a more precise analysis).

With CUIT we also have to take into account their response and resolution target making those times even worse because: they actually have 80% chance to provide a resolution in 2h30 or less meaning that for 20 to 30% of the times it might be even more. Where as i said ISC assure us a 1h resolution target with a 100% accuracy.

I'm lacking a lot of data to fully compare both option for example i know that in case of failure with ISC we can lose up to 24h of data however i have no information on how often those failures occur meanwhile I know those failures occur at least 3 times a year with CUIT but, this time, i have no information on how much we would lose.

In my opinion, i would recommand to stay with ISC even so since i don't have access to the cost difference of both hosting services i can't help you in making the final decision.

CUIT is indeed worse than ISC overall however if it ends up as a significant financial gap i would consider switching to CUIT if the amount of data lost isn't that significant.

	CUIT	ISC
Disponibility	99.99	99.50
MTBF	100 days	?
RPO	?	24h
RTO	2h30-80h	1h
Cost	?	?

I hope my analysis will help you come to a conclusion on the matter, yours faithfully.

SANHES Lucas