Auto Scaling Backup Infrastructure and Metering need to “Align”

When a Service Provider provide protection for their customer’s data and also provide SLA on top of it, often what they miss is to charge them based on SLA and this is most important.

Today there are two major problems we are seeing.

1. First one is the auto-scaling of the backup infrastructure based on workload type, size etc.

2. The second one is not charging customers based on their data protection priority and size and workload category.

Let’s say a Service Provider is providing SLA on Data Protection that can be broadly classified into three categories…

a. Gold = X hour
b. Silver = Y hour and
c. Bronze = Z hour

But if Service Providers don’t charge customers based on SLA they provide, then that will be a loss to them.

It is now time for Service Providers to react and make a solution which will Auto Scale with “Brain” and who ever opt that Intelligent service needs to pay to Service Provider. I started looking into a solution that can scale and also maintain the metering part. This upcoming software is still in flux and this is nothing but a blue print.

Prediction based Auto-Scale Module:-

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This will be an intelligent module which will try to predict the number of hours required to backup of any class. Let’s say Gold Class. If Backup Appliance sees that he has just one proxy and that can support 8 thread and there are more of the same class it will auto scale himself. That means it will spawn another proxy to get the job done within the SLA.

Metering Module for Scalability:-

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However, Service Providers need to charge the customer as he requires their infra to auto scale and provides customers a strict SLA.

So how do a Service Provider charge customer:-

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Let us look at the below formulae.

Formula = R(i) * (amount of VM storage backed up) where R is the slab amount for SLA (Rate per unit)

*i is the different class of SLA.

An example could be R1 = Gold which is X hour and for that Service Provider will charge $10, so if his VM is tagged to Gold class and have 60GB of storage then customer need to pay $10 * 60GB = $600

Similarly, a lower SLA customer will pay $5 for their VM which is tagged to Silver Class, in an example he will only pay $300 ($5 * 60GB) that is just half of the Gold Class.

So, Service Provider will autoscale the infra based on customer’s workload coming in and charge customer for using this.

So the aspect what we are proposing for prediction and auto scale is, Service Provider will autoscale just not only based on a number of thread coming in but also based on SLA.

An example of it is like this:-

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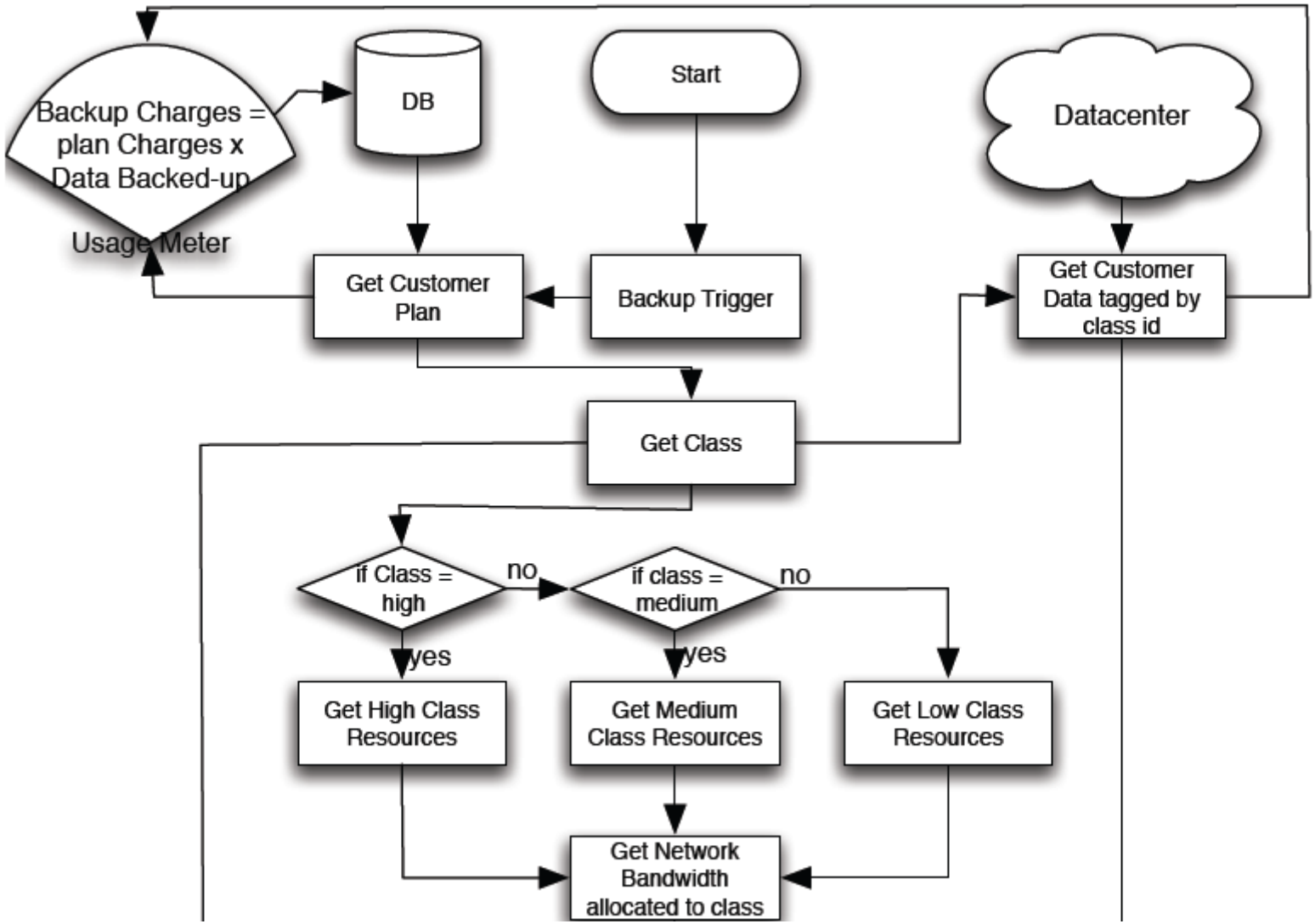
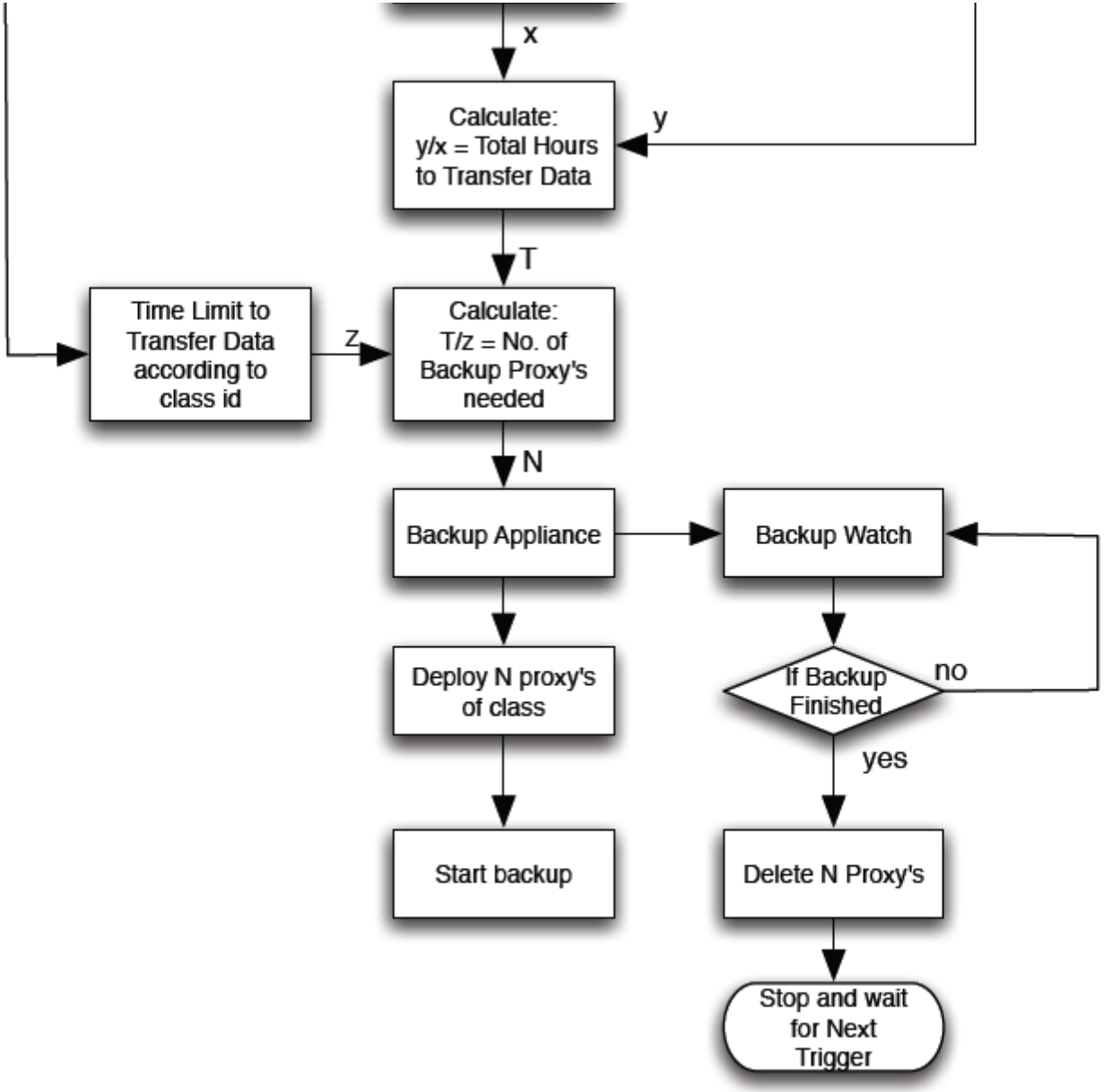
If there is already two thread going on the gold class just fine and another coming in, just because Service Provider's backup infra can support that thread, Prediction based Auto-Scale Module will not allow it to run immediately. First this module will evaluate the amount of storage to be backed up and the time approx to achieve this. If this stipulated time does not meet the SLA for this backup class, then auto scale will happen and the backup job will be run on a new proxy so that Service Provider will be able to meet that SLA.

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