



# Atlassian Leverages Cloudability's Big Data Analytics Engine to Improve Reserved Instance Coverage

## THE CHALLENGE

### Building an Accurate Picture of Cloud Usage and True Cost™ to Guide Smarter RI Purchases

Atlassian is an enterprise team collaboration software company that builds products for software developers, IT departments and business professionals. Its engineering team faced a challenge when trying to get an accurate picture of its Amazon EC2 Reserved Instance (RI) coverage. Without having that picture and knowing the True Cost™ of its cloud it was hard to determine if as many seconds possible of a Reserved Instance term were being put to use.

As Atlassian went through an intense period of growth and its cloud infrastructure became increasingly complex, being able to maintain optimal RI coverage at scale was a key challenge. They needed a platform that was more than a reporting tool—they needed an analytics solution to provide the clarity needed to improve reservation coverage.

## THE SOLUTION

### Using Cloudability to Optimize the RI Buying Process

To maximize RI coverage, Atlassian needed to optimize their RI buying process with more than just default billing tools alone. They used the Cloudability True Cost Platform to create a "waterline," or a visual indicator of where RI coverage becomes high enough to yield significant savings.

With a goal of 90% coverage on their aggregated RIs, Atlassian could use this waterline report to know that they were using as many reservations as they needed to achieve savings and feel confident purchasing additional reservations as their cloud usage scaled.

Determining the profitability of an individual reservation purchase based on its break-even point is a good first step—it's essential to understand the fundamental principles of RI buying on this level. But in the real world, you aren't likely to be faced with such simple examples. Chances are you'll have many instances coming and going throughout each day, which means that in order to make the right Reserved Instance purchases, you'll have to base your decisions on an aggregated view.

*(continued on reverse)*

**LEARN HOW** Australian cloud-based juggernaut, Atlassian, optimized their Amazon EC2 Reserved Instance (RI) usage to run their at-scale infrastructure at the lowest rates possible.



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2002  
Founded

2014  
Customer Since

1700+  
Company Size

Software Developers  
Cloud Engineers  
DevOps Engineers



Advanced  
Technology  
Partner

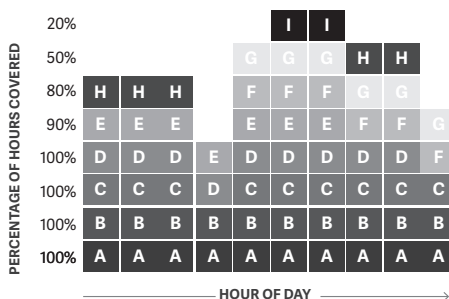
Cloud Management  
Tools Competency

Marketplace Seller

SaaS Partner

## HOW IT WORKS: CREATING ATLISSIAN'S RI "WATERLINE" VIEW

Here's a foundational example of how Atlassian built their waterline report. (figure 1).



**Figure 1** Each letter block represents an individual instance and the second it ran. For example, you can see that instance A and B ran for every second. All the other instances ran for only a part of this time period. Also note that all of these instances are the same (because they are all m4.large/Linux/ap-southeast-2a instances)

Let's say that this 10 second block is repeated over and over again for one year. We can see that if we purchased four RIs, they would each have 100% utilization; a fifth RI would have 90% utilization, a sixth RI 80%, and so on. It's unlikely that you'd purchase a seventh RI, as it would only have 50% utilization. In any case, you can consider each layer in the histogram and compare its utilization against the break-even point of the appropriate RI.

As Atlassian's Principal Systems Engineer, Mike Fuller explains, "We purchase RIs at or above 90% utilization. This provides good savings on your RI purchases and also allows a margin for some reduction in utilization while maintaining savings. If we purchase at a lower utilization, we run the risk of having our RIs underutilized and wasting money. By covering some instances that are running less than 100% of the time, we maintain a higher RI coverage than otherwise would be possible."

## VISUALIZING YOUR WATERLINE WITH CLOUDABILITY

If that sounds complicated, don't worry—Cloudability distills these usage histograms for you, and you can easily set your own waterline value to create an RI portfolio that suits your specific needs.

On the main RI planner page you can see purchasing options, estimated net savings and get an idea of total upfront fees and estimated savings rates (figure 2).

All of your recommendations will now be based on this waterline. To see for yourself, select one of the individual recommendations (using the "Details" button) and look at the displayed histogram (figure 3).

"The power of setting your usage rate in Cloudability is that you are in control of the recommendations Cloudability provides, setting the trigger point on which you purchase RIs for your Amazon Elastic Compute Cloud instances," said Mike. "We are able to use this feature to validate the RI purchases Atlassian makes, assisting Atlassian in maintaining an RI utilization at or above 90% and by result achieving great savings."

**Pro-Tip** ▶ You might even consider setting your threshold at 100%, so that you only purchase RIs that are projected to see 100% utilization. This could be a good option if you have a very large selection of recommended RI purchases, and you need to prioritize which ones to purchase first. Setting this high waterline is also a good option for those getting started with RI purchasing, since it allows you to build up confidence before making more aggressive RI buys.

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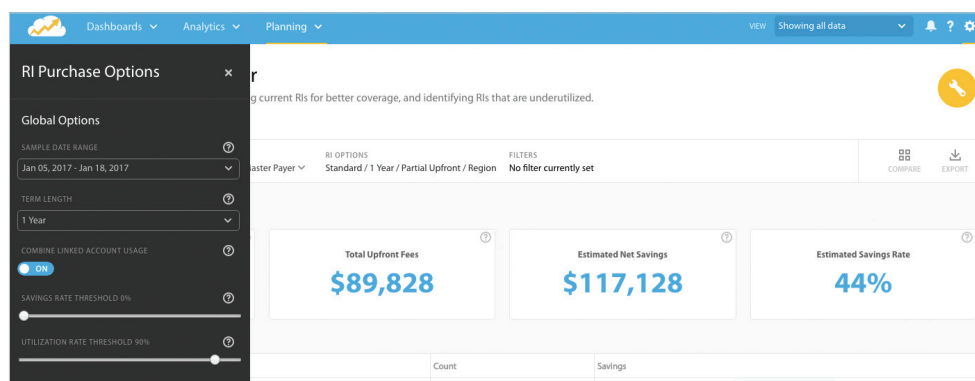
—MIKE FULLER,

Principal Systems Engineer, Atlassian

## ACHIEVING OPTIMAL RI COVERAGE AT THE ENTERPRISE LEVEL

As enterprise infrastructures on the cloud grow and scale, maintaining RI coverage is critical. This cannot be done with over-simplistic reporting tools alone: a True Cost Platform like Cloudability is highly recommended. to track cloud costs at scale. As Atlassian continues to grow, they use Cloudability and our collection of data-driven analyses, reports, and automation to generate the right cloud cost and usage insights to continue running an efficient cloud infrastructure at scale.

Whether you're already using a waterline strategy, or have yet to fully analyze your RI needs, Cloudability can help you start planning for the future of your organization's cloud today.



**Figure 2 (above)** Usage threshold dropdown on main RI page

**Figure 3 (right)** Visualizing the waterline within Cloudability

