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SmartSpend™ Bulletin

AWS Savings Plans – What You Need to Know About Cost Optimization

The introduction of AWS Savings Plans is a gamechanger for Amazon Web Services customers seeking cost management simplification. While the majority of customers will benefit from this overhaul of AWS's compute pricing model, there are several implications that should be considered if customers want to reach their true cost optimization potential.

It was over a decade ago that Amazon Web Services introduced Reserved Instances. At the time, it precipitated a fundamental shift in how cloud services were budgeted and priced. It also gave customers a much-needed boost of flexibility and simplicity. Until that time, the pay-as-you-go (or on-demand/spot) pricing model reigned – effective and still in use today, but largely more expensive than the RI pricing model.

Since that time, RIs have evolved considerably and all in the name of continuing to provide customers with more flexibility, lower pricing and a more simplified way to manage AWS spend. Except for one problem. For the average enterprise, it's still difficult to plan for RIs and optimize costs. There are more than 200 RI SKUs for us-east-1 region alone. Furthermore, RI demand within the typical AWS customer has far outpaced AWS's efforts to simplify. Many customers' RI portfolios have exploded in the last decade and most are sub-optimized for use and cost.

AWS has set out to change the game once again. In November 2019, AWS announced an overhaul of its pricing model with the introduction of Savings Plans. Rather than purchase RIs for a particular instance type, customers can now commit to a baseline level of compute spend per hour that will be paid regardless of actual use. If a customer goes above that usage level, they pay existing on-demand rates.

For most customers, Savings Plans are a no-brainer and will significantly simplify overall management of AWS services. But there are a few reasons why companies may want to consider the transition carefully.

AWS Savings Plans come in two flavors – Compute Savings Plan and EC2 Instance Savings Plan. From AWS's blog:

> *Compute Savings Plans provide the most flexibility and help to reduce your costs by up to 66% (just like Convertible RIs). The plans automatically apply to any EC2 instance regardless of region, instance family, operating system, or tenancy, including those that are part of EMR, ECS, or EKS clusters, or launched by Fargate. For example, you can shift from C4 to C5 instances, move a workload from Dublin to London, or migrate from EC2 to Fargate, benefiting from Savings Plan prices along the way, without having to do anything.*
>
> *EC2 Instance Savings Plans apply to a specific instance family within a region and provide the largest discount (up to 72%, just like Standard RIs). Just like with RIs, your savings plan covers usage of different sizes of the same instance type (such as a c5.4xlarge or c5.large) throughout a region. You can even switch from Windows to Linux while continuing to benefit, without having to make any changes to your savings plan.*

Customers can purchase, track and interact with Savings Plans through Cost Explorer. Cost Explorer includes a recommendations engine which analyzes historical usage (weekly, monthly, bi-monthly) and suggests purchase options. These cover one- and three-year terms as well as payment options familiar to RI customers – no, partial and all upfront.

SHOULD I CONTINUE TO USE RIs?

For most customers, Savings Plans are a no-brainer and will significantly simplify overall management of AWS services. The majority will benefit from transitioning from RIs to Savings Plans. But there are a few reasons why companies may want to consider the transition carefully.

As with most things IT, simplicity comes at the expense of control. With Convertible RIs, customers can change from 1 year to 3 year, or no upfront to partial upfront, or be exchanged when prices fluctuate. Savings Plans don't offer this level of control.

Another reason is no Marketplace exists for savings plans. You're stuck with your Savings Plan commitment. This can be a disadvantage for companies that are used to turning to the RI Marketplace for shorter-term Standard RIs to cover temporary usage in the near term. It's also worth noting that Savings Plans may disrupt internal purchasing processes and pose CapEx accounting treatment concerns to auditors. Given how much some enterprise customers spend with AWS, the impact could be material.

It's important to note that there is no upgrade from RIs to Savings Plans. Customers will need to wait for their existing RIs to expire before purchasing Savings Plans.

HOW DO SAVINGS PLANS IMPACT BEST PRACTICES FOR AWS COST OPTIMIZATION?

It's a firmer commitment. With RIs, customers had access to savings tools/techniques that allowed for flexibility in their commitments. Examples include the exchange of convertible RIs and listing RIs on AWS's RI Marketplace. Savings Plans aren't compatible with these tools and techniques. Once a Savings Plan is purchased, the customer is stuck with it.

Calculating your commitment can be tricky. The hourly commitment customers make with Savings Plans is in post-discount dollars, which is new. Factor in the fact that matching instances may have slightly different discounts and it's easy to see why it can be difficult to understand how much of the Savings Plan will actually be consumed. This complexity will likely cause many customers to under-commit in their Savings Plan purchases, which then opens the door to paying list price for more instances.

Stacked Saving Plans will make managing commitments more complex. Those customers with static compute environments will find Savings Plans easy to manage (for the most part). But those with environments that are scaling up may find themselves "stacking" Savings Plans to handle changing requirements. Different expiration dates plus the calculation of commitments in post-discount dollars will add a new layer of complexity to cost management, and a learning curve that customers will need to quickly overcome.

Savings Plans have many advantages, but they are also designed to bolster AWS's profitability. AWS is good at responding to customers' demands for simplification, and Savings Plans are the latest example. The structure and built-in calculator tools will reduce a lot of the complexity around cloud cost management for many customers. But customers do need to vet calculations and automated recommendations. It's reasonable to expect the learning curve associated with managing Savings Plans and the likelihood of customer under-commitments will benefit AWS's revenues and profitability.

THE BOTTOM LINE

AWS Savings Plans provide a much welcome simplification to the way AWS customers manage their instance spend. However, they aren't a one-size-fits-all solution to the inherent complexities of cloud cost management. Savings Plans do little address a core villain of cloud cost management, which is term, and have the potential to tie customers to AWS in perpetuity.

"Hyper-optimizers" – those customers that place strategic focus on use and cost optimization – will likely require a combination of RIs and Savings Plans (in conjunction with advanced savings tools) to reach full potential. As such, managing these options for maximum value and savings will still require careful inspection and cost-modeling analysis.

ABOUT NPI

NPI is an IT sourcing consulting company that helps enterprises identify and eliminate overspending on IT purchases, accelerate purchasing cycles and align internal buying teams. We deliver transaction-level price benchmark analysis, license and service optimization advice, and vendor-specific negotiation intel that enables IT buying teams to drive measurable savings. NPI analyzes billions of dollars in spend each year for clients spanning all industries that invest heavily in IT. For more information, visit www.npifinancial.com.

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