White Paper

The Future of Automation in the Cloud

March 2013

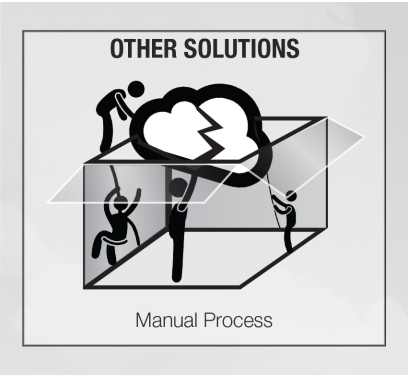
The emergence and evolution of automation has brought about continual change within the technology industry and for society as a whole. In the future, automation will continue to propel us forward and introduce new methods to complete the mundane, boring and simple tasks of today.

Automation is what we have been striving for since we began our technological journey. From the calculator to smartphones, automation has been injected into every aspect of our lives. For decades, the vision for technology has been to create tools that will serve humanity and give us back those precious hours spent on the routine. In the past, we glorified the role it would play in the future by envisioning androids and computers with full voice-recognition and control. While those are on the horizon, we've already begun moving in that direction through home automation systems, GPS navigation systems and others that are making the move toward automated task completion and decision-making.

In the last few years there has been a push toward consolidation of tasks, or sending a complex set of tasks to an automation system to do it much faster than manual processes. Going forward, we will see automation play the role as the decision maker, giving software the capability to make rational decisions about how to react to rapidly changing environments. We've already seen the rather messy birth of this trend with the infamous stock market crash last year, when millions of auto-trading software algorithms all trended toward the same decision and the market lost over 1,000 points in less than an hour. Despite these bumps, automation systems will eventually make these decisions in milliseconds, quite the improvement over the relatively slow human response time.

How automation impacts cloud computing:

To put it simply: automation in the cloud is important because the cloud is too big and complex for a legacy set of tools to react to in the amount of time that customers of this age expect and demand. When a customer needs to have a server deployed in under a minute, you need to be able to rely on your automated process to deliver that product in such a short timeframe. When a customer's assets are being overwhelmed by unforeseen popularity, they may not have the time to call their cloud provider and have someone set up a new system manually for them – they need near-instant reaction time.

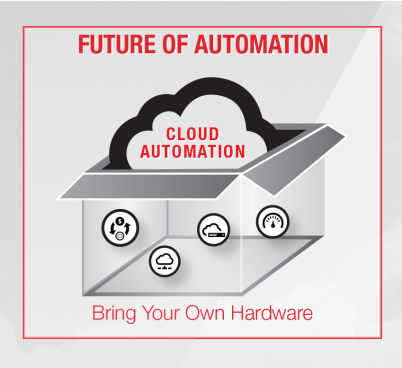


In a world where people won't wait more than four seconds for a webpage to load before losing interest, the faster a cloud provider can react to their client's needs, the more customers they'll be able to retain.

Automation in a cloud environment is important on several fronts:

- Simplifying creation and setup of cloud computing assets
- Slimming down otherwise complex billing and ordering systems
- Allocation and de-allocation of reaction-driven process of dynamic resource

Giving your software the capability to not only provision a set of compute resources for a customer's or internal employees virtual machine, but also set up all the networking, software package loading, and licensing that would be necessary to get an asset up and running has been a key to system administrators everywhere.



Most relevant to the concept of the future of automation, though, are the reaction-driven automation systems. A cloud automation tool that can detect a client's spike in resource usage, and dynamically allocate additional servers or compute resources to handle the additional load, and then de-allocate them when demand drops, is one of the most powerful tools in a cloud automation environment.

Automation is Appcore's next step forward for cloud computing: BYOH, or Bring Your Own Hardware, allows a customer that may already have the hardware resources they want to begin offering cloud services to customers, but they have no experience with any cloud automation software. Appcore is developing an appliance that a customer can purchase, plug into their hardware, and after some simple configuration it could transform the hardware into a cloud-capable system.

The demand for this type of product is gathering interest in the cloud technology field as it opens up the doors to many more customers by making entry attainable. It will also enable you to transform your infrastructure assets into revenue generating compute resources.

This is only the beginning – the next steps beyond BYOH are the untested waters of the Software Defined Datacenter (SDDC). This technology, when it finally makes its appearance, will allow a datacenter owner to provision segments of their compute resources for the SDDC Cloud that a customer may want to setup. For the customer, all they need to purchase is the SDDC software, rent the hardware and bandwidth they need and they're up and running. Though this technology is still in its infancy, it is an exciting concept that many cloud providers are eagerly waiting.

Conclusion

The future of automation is an exciting field that many are anticipating. The importance of automation in a cloud environment has become evident as they gain traction among enterprises and providers. BYOH and SDDC are new frontiers that will continue to propel society forward as they become mainstream automation methodologies.

For more information

To learn more about Appcore Onsite™ and offering cloud solutions to your customers, contact your Appcore sales representative or visit http://www.appcore.com/

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