**Topic: SAS VA in AWS Quickstart (Project “Mercury”)**

## **Definition and Scope**

Create an AWS Quickstart template for SAS Viya deployments.

From the AWS web site: “Quick Starts are built by AWS solutions architects and partners to help you deploy popular solutions on AWS, based on AWS best practices for security and high availability. These reference deployments implement key technologies automatically on the AWS Cloud, often with a single click and in less than an hour. You can build your test or production environment in a few simple steps, and start using it immediately.”

AWS Quickstart is basically an AWS Cloudformation template that stands up infrastructure and optionally installs software on it. The final template lives in a public github repository and is also listed on the [AWS Quickstart page](https://aws.amazon.com/quickstart/).  
  
The Quickstart template will allow system administrators to create a working Viya environment from scratch with “one click”, using a standard SAS Ansible playbook and license as input.

## **Requirements**

* **License**

“Bring your own Playbook”. The playbook zip file that customers receive when they order the software would be a required input parameter to the Quickstart. The infrastructure will be provisioned, and then the software will be deployed on it.

* **Product Mix**

Viya/VDMML or subsets  
SAS/Access Products: can be part of the product mix. DB client pieces NOT in scope of Quickstart (customer would have to install manually on VM(s))

* **Product Version**  
  Start with 17w12. As 17w47 becomes available, add it or switch to it.
* **Base OS**

Latest RHEL version from Amazon (currently 7.4). Consider adding other options such as Centos and Amazon Linux later.

* **Identity Provider**  
  Provide OpenLDAP with a few default users by default. Users can later reconfigure Viya to point to their own Identity Provider.   
  NB: switching provider for SAS/Studio is more involved, since it requires ldap/sssd configuration on SAS/Studio VM, in addition to the SAS/Viya identity service value changes.
* **CAS Server Sizing**Will depend on the license. The customer would select the CAS server instance sizes to match the CPUs in the setinit.
* **Instance Types**  
  Picked by the user from a list of supported Types.  
  Use i3 instance type family by default. Large, fast temporary ephemeral drives are good match for saswork and cas\_cache.   
  NB: needs disk –reprovisioning on vm restart.  
  Allow R3 and R4 families as options (less and slower storage)?
* **Compliance (NIST, PCI)**   
  no provisions at this point
* **Data Persistence**  
  Optional EBS volumes for SAS/Studio and Controller host.
* **Other**Provide for both SMP and MPP  
  Provide checks for successful restart of Viya stack after Stop/Start of stack.

## **Interactions with Other Teams**

* TS: Software support should be as for other purchased software.   
  Question: what about infrastructure questions? How should TS route them? Should TS be involved in this project early on to build awareness and know-how about AWS infrastructure?
* Deployment Testing: the deployments should be independently tested  
  Question**:** how to staff the testing? Should the prospective testers involved early to become familiar with the project?  
  Question: is other testing needed? Pen Testing? Performance Testing? Others?

## **Timeline**

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2 weeks – learn Quickstart, iron out open questions  
2 weeks – establish cooperation with AWS  
6 weeks – develop and test template  
4 weeks – finalization: testing, legal, marketing

## **References**

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| Quickstart | <https://aws.amazon.com/quickstart/> |
| Quickstart Build Process Overview | <https://aws-quickstart.github.io/option3.html> |
| Quickstart Build Process Details | <https://aws-quickstart.github.io/building.html> |
| CoreCompete’s SAS Grid Quickstart (just infrastructure, no SAS Software) | <https://github.com/aws-quickstart/quickstart-sas-grid/>  <https://aws.amazon.com/quickstart/architecture/sas-grid-infrastructure/> |
| Erwan Grangers CloudFormation demo | <http://sww.sas.com/blogs/wp/gate/14362/the-unattended-deployment-viya-3-2-edition/canepg/2017/04/07>  https://gitlab.sas.com/cloudup/ViyaBareOSAutomation/ |

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