# Initial Setup on AWS Cloud Systems:- Adapt the system settings for a new system created from existing system image, or Teamcenter specific configuration adaptation Proxy Settings, No Proxy hosts bashrc pass system aliases hostfile configuration Certificates

# Additionally, store the system configuration in GIT/DB/??

Use case definition

User wishes to provision a Adapt the system settings for a new system created from existing system image.  
This use-case is applicable when a new system created from a pre-existing system image, for a BMW system, or an Teamcenter specific configuration adaptation for new system.

User Role(s)

ARPLA User

Technical Complexity

Medium

Technical Modules/Components

Ansible: Configuration management tool  
Jenkins: CI/CD tool  
Git: Version control tool  
HashiCorp Vault: Secret management tool

Input

* The existing system image or Teamcenter specific configuration that will be use as a basis for the new system.
* Machine hostname(s) or IP address(es) to perform the changes.

Output

* An AWS new created system launched with the desired specifications and settings.
  + The system settings on the new system updated and configured correctly to match the copied settings.
  + Any unexpected issues or errors resolved and the new system functioning as expected.

Steps

**User actions:**

1. User selects the existing AMI to adapt the system settings to the newly created system.
2. User Copy the required system settings from the old system or the configured system to the new AWS test system.
   1. This can be done using methods such as SCP or SFTP.

Alternatively, this information could also be sent as parameters to the job, for example, when this job is being triggered by a parent job pipeline.  
In that case, these would not be user-actions anymore.

**System actions:**

1. **PARALLEL STEP** Adapt and update the new system settings created from existing system image. For this step a preexisting system image is required):
   1. Update Proxy Settings: Update the system's proxy settings if required.
   2. Configure No Proxy Hosts: Configure the system to access resources on the local network that should not be accessed through the proxy server.
   3. bashrc  
      Adapt the script to include all necessary invocations.  
      Export required environment variables.
   4. pass  
      Validate the installation. If not installed, pass needs to be installed first.  
      The required entries need to be entered once the software is available.
   5. System aliases  
      Add/modify the required system aliases.
   6. hosts file Configuration  
      Add the hosts entries into the hosts file.
2. **PARALLEL STEP** Create and place certificates:
   1. For freshly provisioned systems, system certificates have to be generated.  
      Generate the certificates locally, and then upload the certificate signing request on the BMW CLCM portal:  
      <https://clcm.bmwgroup.net/>
   2. After the signed certificates are available, they need to be placed on a specified location on the system.
3. **PARALLEL STEP** Install required 3rd party software on the system:
   1. Java
   2. Python
   3. ...
4. Generate a report of the executions for the end-user.  
   The report should clearly state all the executions/adaptations/installations performed on the machine, and their status.  
   Example:  
   ------------------------------------------------------------  
   Execution finished  
   ------------------------------------------------------------  
   Total: 11,    success: 8,     skipped: 2,   failed: 1

Technical Specification

1. Create an Ansible playbook to adapt the system settings on the new system created from existing system image.
   1. Playbook Input:
      1. Inventory file update.
      2. What task need to be perform.
   2. Playbook Output:
      1. Required system setting adaptation done on the newly created system.
2. Create a Jenkins Job to integrate the Ansible, and execute them in correct sequence.
   1. Job input:
      1. Playbook execution
      2. Environment selection
      3. AWS new system selection created from existing system image.
   2. Job Output:
      1. The job should provide the following expected outputs according to the execution mode:
         1. on AWS Cloud Systems:- Configured the system settings for a new system created from existing system image, with Teamcenter specific configuration
   3. Job Description:  
      This Jenkins job execute the above designed ansible Playbook Script and to execute the script to configure the new system with Teamcenter specific adaptation.
3. System configuration stored in Hashicorp Vault.