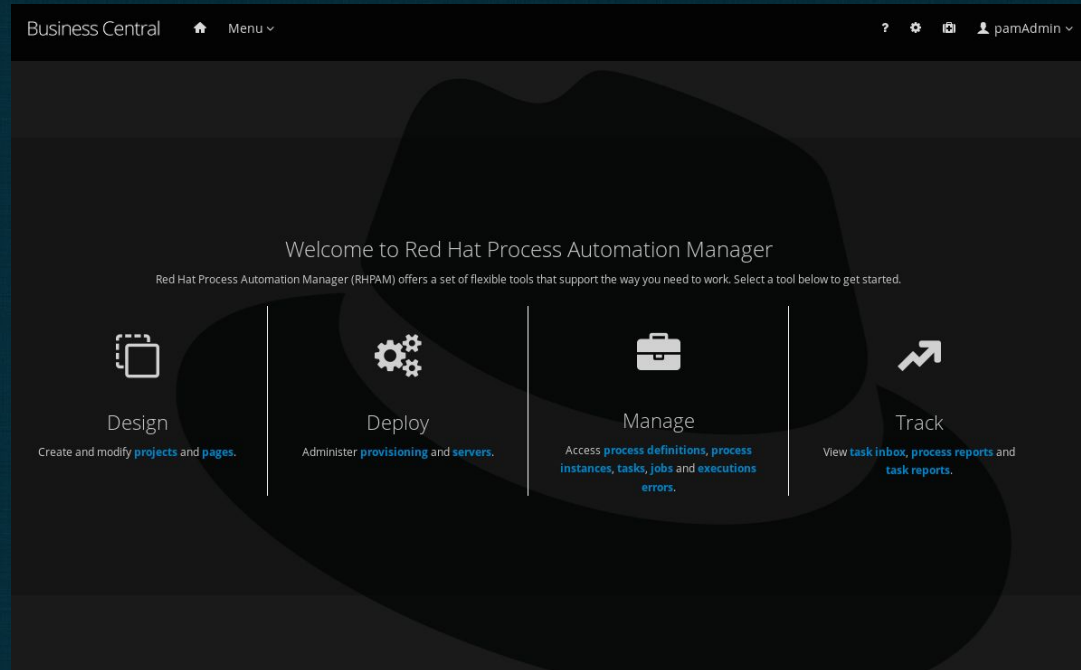
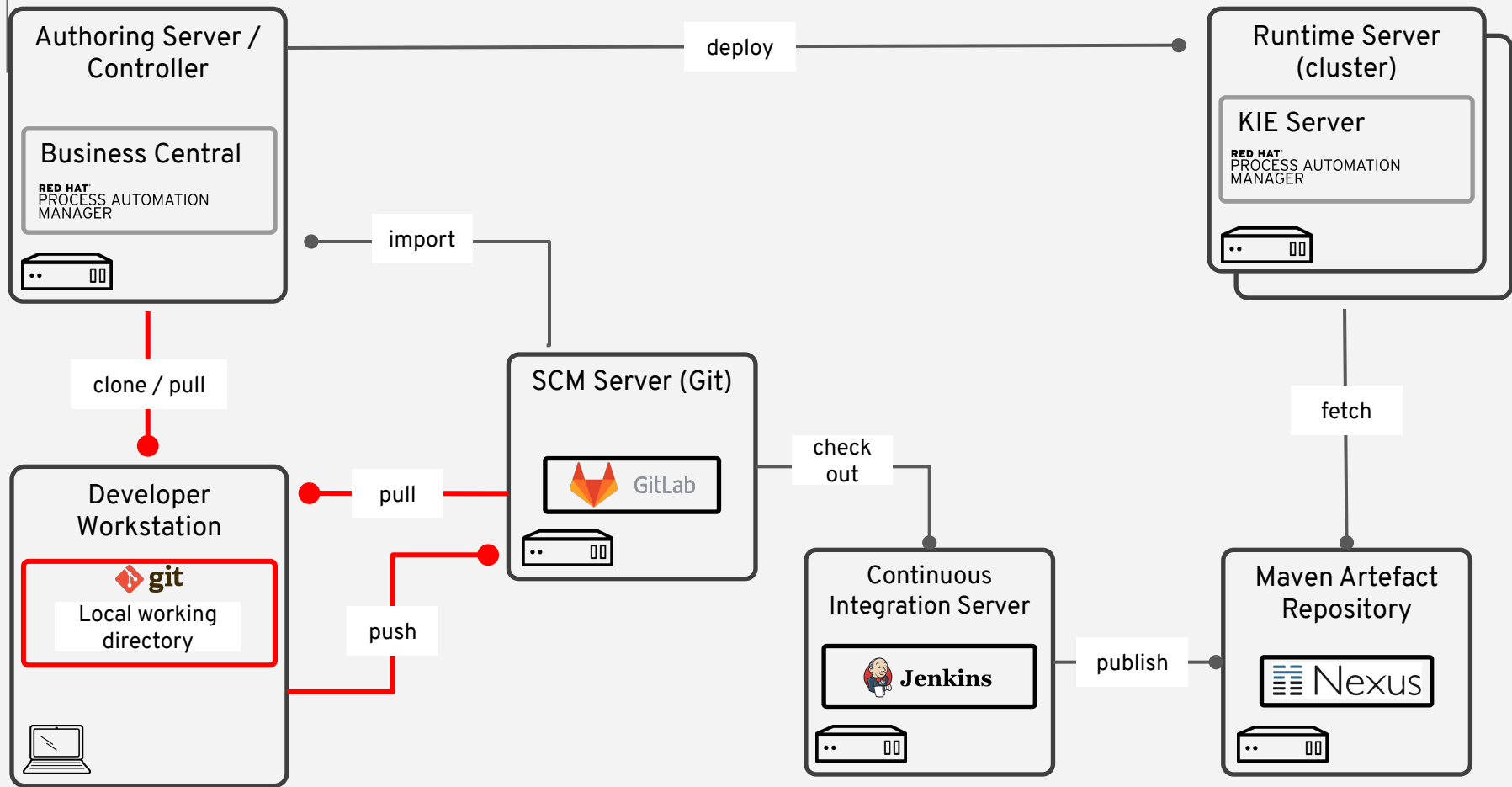


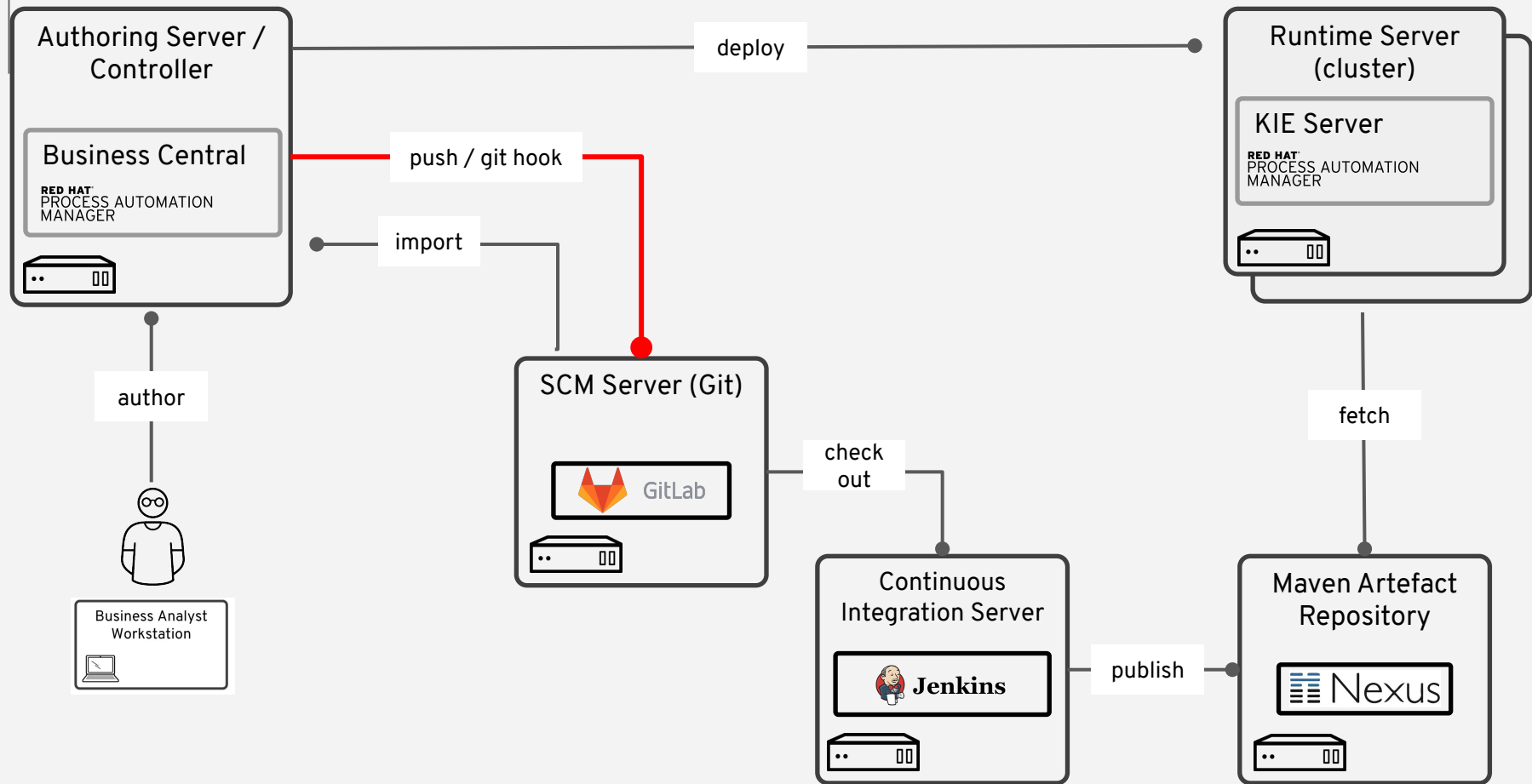
Code Synchronization with git hooks

Keeping Business
Central projects in
sync with external git
repositories





High Level Overview of deployment without post-commit git hooks



Git integration through git hooks

Git hooks are bash scripts that execute before or after Git events such as git commit or git push. In Business Central, you can use Git hooks to configure repositories to trigger specified actions every time events happen.

You can integrate remote Git repositories with Business Central by using post-commit Git hooks. This enables you to automate content replication between Business Central and remote repositories.

A post-commit Git hook executes after every commit as a sync operation. Business Central waits for the post-commit bash to complete and no other write operation occurs in the repository.

Post-commit git hooks in BC - nota benum

- All modifications to the project must be done through BC
 - BC cannot 'git pull', cannot merge changes from external repos
- Branches can be created in BC, but propagated to remote git after a “save” operation
- Git hooks do not “delete”
 - Projects deleted in BC will not be deleted in external git repo
 - Branches deleted in BC will not be deleted in external git repo
- But, projects assets, for example BPMN, DMN, Rules, etc, WILL be deleted

Use BC REST endpoints to delete and re-import project

- DELETE <bc_url>/rest/spaces/MySpace/projects/\$PRJ_NAME
- POST <bc_url>/rest/spaces/MySpace/git/clone

Post-commit git hooks in BC - implementations

Java Based

- Linked to by RHPAM documentation
 - <https://github.com/kiegroup/bc-git-integration-push>
 - Can handle GitHub, GitLab and GitLab Enterprise
 - Porcelli's original
 - <https://github.com/porcelli/bc-git-integration-push>
 - Additionally can handle Bitbucket V2

Bash based

- bcgithook:
<https://github.com/redhat-cop/businessautomation-cop/tree/master/bcgithook>
- Handles any (GitLab, GitHub, Bitbucket, Azure, Gitea, Gogs, ...)

Post-commit git hooks in BC - installation

3 steps

1. Configure BC for git hooks
2. Install git hook implementation
3. Configure git hook implementation (external git URL, credentials, ...)

Step 1

- Specify git hooks location by setting system property “org.uberfire.nio.git.hooks”
 - For example “`${jboss.home.dir}/git-hooks`”

Step 2

- Copy into “`${jboss.home.dir}/git-hooks`” directory git hook implementation
- Must be a bash script named “`post-commit`”
- For Java-based implementation “`post-commit`” script invokes Java class

Step 3, depends on implementation

Demo

- Installation
 - <https://github.com/redhat-cop/businessautomation-cop/tree/master/pam-eap-setup>
 - <https://github.com/redhat-cop/businessautomation-cop/tree/master/bcgithook>
- Import project from external git repo - review branches
- Demonstrate syncing with external git repo
 - Creating, modifying and deleting an asset in Business Central
 - Creating a branch in Business Central
 - Deleting a branch in Business Central
- Create and deleting a project in Business Central

Creation of a project BC differs based on external git repo:

- GitLab
- Gitea

Will allow creation of repository/project directly from BC

- GitHub
- Bitbucket
- Azure DevOps

Create an empty repository first (no readme, no .gitignore or anything else)

Thank you