

# System Design

## Controller (Linux/Docker)

Image: bak-controller

Language: Python

API: RESTful

Database: Sqlite  
- Instance table  
- Policy table

Dependencies:  
- ssh server  
- rsync

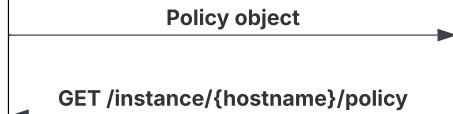
## Linux Instance

Setup Script: Initialise connection with controller and exchange keys (rsync requires ssh).

Backup Script: Sends API GET /instance/{hostname}/policy/ to get backup configuration. Then performs backup.

Language: BASH

Dependencies:  
- ssh client  
- rsync



## bak - CLI

```
bak instance register \  
--hostname "deakin.it.redback" \  
--controller "ec2-1234.compute-1.amazonaws.com" \  
--tool "rsync" \  
--copies 3 \  
--freq "0 0 * * SUN"
```

## Windows Instance

TBC

# Database Schema

## Instance

hostname TEXT

## Policy

hostname TEXT  
tool TEXT  
freq TEXT (Cron format)  
copies INT

Author: Codey Funston (S222250824@deakin.edu.au)

Title: bak - Backup Orchestration Tool

Created: 03/03/2025

Updated 05/03/2025

Team/Project: Infrastructure/Data Protection and Recovery

