# Session 221 - Operationalization using Microsoft R Server on single node machines and Spark clusters

## Prerequisites

* Please bring a wireless enabled laptop.
* Download [free Postman app](https://www.getpostman.com/) for API development.
* Make sure your machine has an ssh client with port-forwarding capability. On Mac or Linux, you can use the ssh command in a terminal window. On Windows, download [plink.exe](https://the.earth.li/~sgtatham/putty/latest/x86/plink.exe) from [here](http://www.chiark.greenend.org.uk/~sgtatham/putty/download.html). Alternatively, see [this page](https://vapaunic.visualstudio.com/_git/mladss2017?_a=preview&path=%2Fdocs%2Flinux.md&version=GBmaster) for details on the Windows shell options.
* Provision a Linux CentOS Data Science VM (DSVM) on Azure Portal [following these instructions](https://vapaunic.visualstudio.com/_git/mladss2017?_a=preview&path=%2Fdocs%2Fdsvm_provisioning.md&version=GBmaster).
  + Make sure to provision Standard DS12\_V2 type.
  + **For the VM user name please use *remoteuser*!**