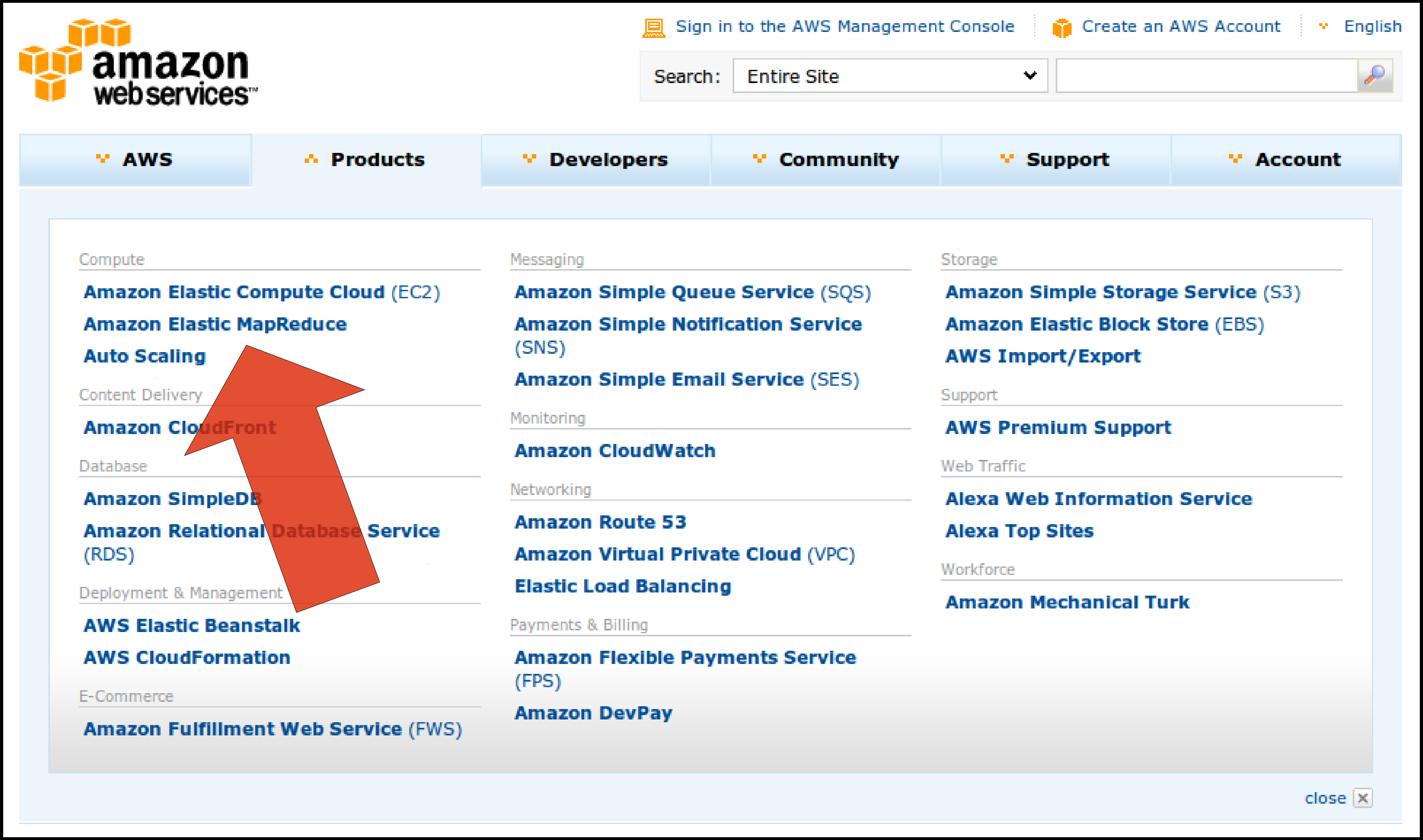
SEGUE

parallel R
in the cloud
two lines of code

no kidding!

SEGUE



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- Amazon Simple Email Service (SES)

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- Alexa Web Information Service
- Alexa Top Sites

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- Amazon Mechanical Turk

close ☒

SEGUE

syntax...

```
require(segue)
myCluster <- createCluster()
```

contratulations. we've built a hadoop cluster!

SEGUE

more syntax...

parallel apply() on lists:

base R:

```
lapply( X, FUN, ... )
```

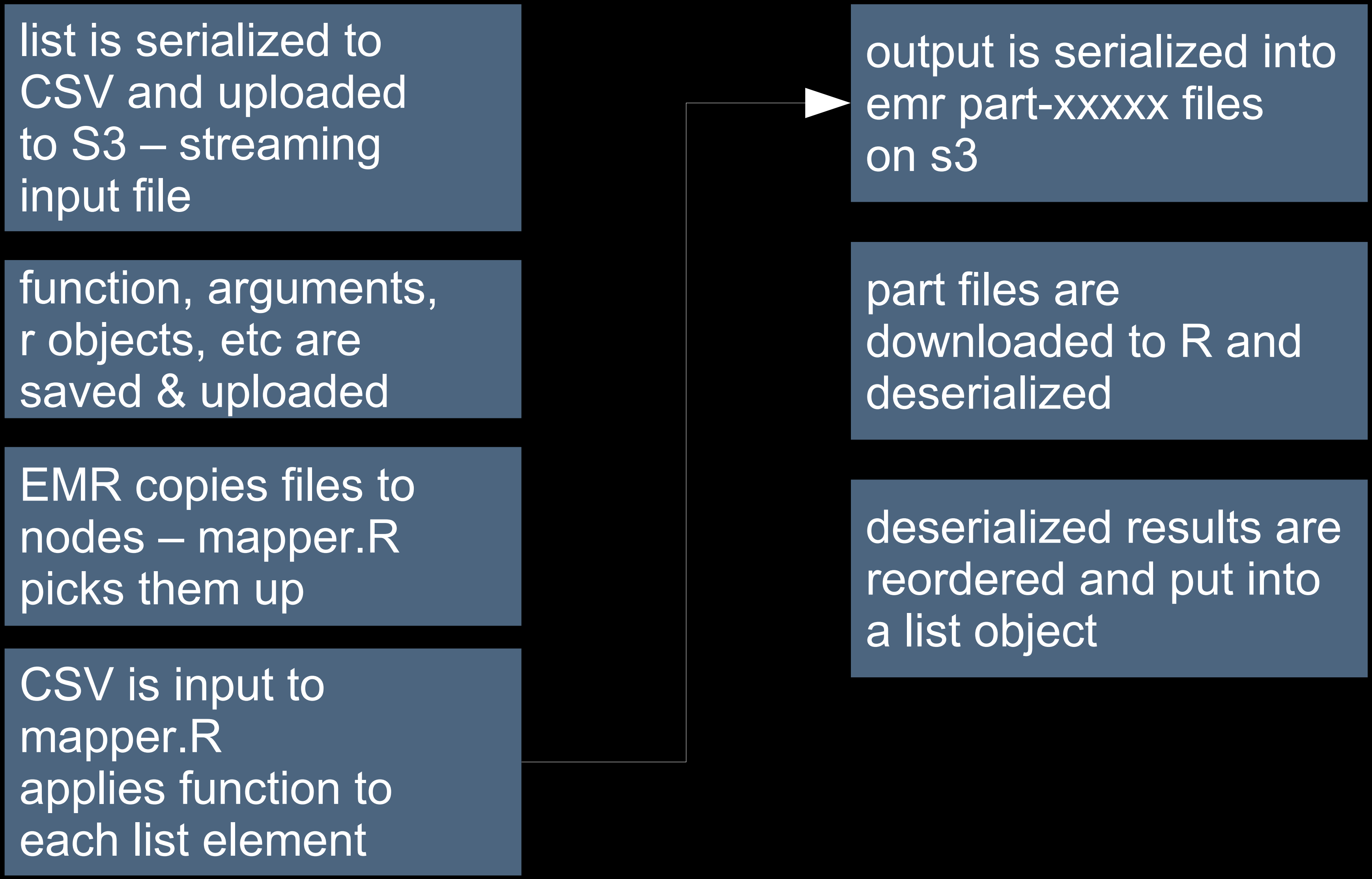
segue:

```
emrlapply( myCluster, X, FUN, ... )
```

howzit work?

emrlapply()

SEGUE



list is serialized to CSV and uploaded to S3 – streaming input file

function, arguments, r objects, etc are saved & uploaded

EMR copies files to nodes – mapper.R picks them up

CSV is input to mapper.R applies function to each list element

output is serialized into emr part-xxxxx files on s3

part files are downloaded to R and deserialized

deserialized results are reordered and put into a list object

SEGUE

when to use segue...

embarrassingly parallel

cpu bound

apply on lists with many items

object size: to / from s3 roundtrip

SEGUE

segue project page

http://code.google.com/p/segue/

google groups

http://groups.google.com/group/segue-r