

to be used by random generator

example:

```
some_parameter_id : RAND_REPLACE : client:/home/ubuntu/stack.c
                  : BUFFER_SIZE : 200 : 2000
```

(all one line) will randomly replace the token string "BUFFER_SIZE" found in file stack.c on the mylab.client.student container with a number ranging from 200 to 2000

RAND_REPLACE_UNIQUE : <filename> : <symbol> : <LowerBound> : <UpperBound>

Identical to RAND_REPLACE, except randomly selected values are never resused within any given upper/lower bound range. This is intended for use on IP addresses, e.g., 198.18.1.WEB_IP. It is suggested that random ranges be selected such that they do not intersect any non-random address allocations.

HASH_CREATE : <filename> : <string>

Create or overwrite a file with a hash of a given string and the lab instance seed.

where: <filename> - the file name that is to contain the resulting hash. The file name is prefixed with a container name and a ":", (the container name is optional for single-container labs).

This may be a list of files, delimited by semicolons. The file name is optional, (in cases of a single container). This may be a list of files, delimited by semicolons.

<string> - the input to a MD5 hash operation (after concatenation with the lab instance seed)

example:

```
some_parameter_id : HASH_CREATE : client:/home/ubuntu/myseed
                  : bufferoverflowinstance
```

A file named /home/ubuntu/myseed will be created (if it does not exist), containing an MD5 hash of the lab instance seed concatenated with the string 'bufferoverflowinstance'.

HASH_REPLACE : <filename> : <symbol> : <string>

Replace a symbol in a named file with a MD5 hash of a given string concatenated with the lab instance seed.

where: <filename> - the file name (file must exist) where <symbol> is to be replaced. The file name is prefixed with a container name and a ":", (the container name is optional for single-container labs). This may be a list of files, delimited by semicolons.

<symbol> - a string that will be replaced by the hash

<string> - a string concatenated with the lab instance seed and hashed

example:

```
some_parameter_id HASH_REPLACE : client:/root/.secret :
```