facebook
Kernel Upgrades at Facebook

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Security

Bugs

New Features

Performance
Kernel Upgrade Framework
Kernel Upgrade Framework

- continuously running jobs
- parallelism
- unattended
- alarms
- pause/continue/disable
- sharding based on different kernel versions
UpgradeGroup(
    name="{hostprefix}"",
    #generator="default",
    #constraints=[],
    #parallelism="serial",
    #minhosts=1,
    #atonce=0.001,
    #shards=[],
)
constraints
{
  [
    ["sys.foo.dc1.1"],
    ["sys.foo.dc1.2"],
    ["sys.foo.dc1.3"]
  ]
}
constraints

[ [ "sys.foo.dcl.1","sys.foo.dcl.2" ] ]
constraints

[
  ["sys.foo.dc1.1", "sys.foo.dc1.2"],
  ["sys.bar.dc2.1", "sys.bar.dc2.2"]
]
example config

UpgradeGroup(
    name="{foobar}",
    parallelism="cluster",
    atonce=0.01,
    shards=[
        [0.01,"v4.11-fb:X86:STANDARD:RC"],
        [0.05,"v4.16-fb:X86:STANDARD:OFFICIAL"],
    ],
    passthrough = {
        "action_timeout": 700,
    }
)
["/usr/local/bin/kernelctl", "install", "-q", "-p", "4.6.7–73_fbk21_3608_gb5941a6"] count
["/usr/local/bin/kernelctl", "install", "-q", "-p", "4.11.3–70_fbk18_4116_g1cf3f1a0ca4f"] count
["/usr/local/bin/kernelctl", "install", "-q", "-p", "4.11.3–67_fbk17_4093_g2bf19e7a0b95"] count
We want you to upgrade kernels
Thank You