

Constraints descriptions

Among : A constraint to force a set of VMs to be hosted on a single group of nodes

Ban : A constraint to disallow the given VMs, when running, to be hosted on a given set of nodes.

CumulatedResourceCapacity: Restrict the cumulated amount of virtual resources consumed by the VMs hosted on the given nodes.

CumulatedRunningCapacity: Restrict to a given value, the cumulated amount of VMs running on the given set of nodes.

Fence: A constraint to force the given VMs, when running, to be hosted on a given group of nodes.

Gather: A constraint to force a set of VMs, if running, to be hosted on the same node.

Killed : A constraint to force a set of VMs to be killed.

Lonely: A constraint to force all the given VMs, when running, to not share their host with other VMs. Co-location between the VMs given as

Offline : A constraint to force a set of nodes at being offline.

Online: A constraint to force a set of nodes at being online.

Overbook: A constraint to specify and overbooking factor between the physical resources offered by a node and the virtual resources that are consumed by the VMs it hosts.

Preserve: Ensure the allocation of a given minimum amount of resources for each of the given VMs. If a VM is not running, the constraint ignores it. The amount to allocate must be specified as a minimum or an exact value. At most, the VM will have an allocation of resources equals to the maximum allowed

Quarantine: A constraint to put some nodes into quarantine. running VMs in the quarantine zone can not leave their node while no VMs outside the quarantine zone can be hosted on the nodes in quarantine.

Ready: A constraint to force a set of VMs at being ready for running.

Root : A constraint to avoid relocation. Any running VMs given in parameters will be disallowed to be moved to another host. Other VMs are ignored.

Running : A constraint to force a set of VMs at being running.

SequentialVMTransition: A constraint to force the actions that change the given VMs state to be executed in the given order.

SingleResourcecapacity: Restrict the amount of virtual resources consumed by the VMs hosted on each of the given nodes.

SingleRunningCapacity: Restrict the hosting capacity of each of the given server to a given amount of VMs.

Sleeping: A constraint to force a set of VMs at being sleeping.

Split: A constraint to force several set of VMs to not share any node when they are running.

SplitAmong: A constraint to force sets of VMs inside to be hosted on distinct set of servers. VMs inside a same set may still be collocated.

Spread: A constraint to indicate that the given VMs, if running, must be hosted on distinct nodes.

constraints's json syntax

Gather/ Killed/ Lonely/ Ready/ Root/ Running/ SequentialVMTransitions/ Sleeping/ Spread: { name: <string>, id: <Constraint name>, vms: [<UUID ₁ > ..., <UUID _n >] }	Ban, Fence: { name: string, id: "Ban" "Fence", vms: [UUID ₁ , ..., UUID _n], nodes: [UUID ₁ , ..., UUID _n] }
CumulatedResourceCapacity/ SingleRessourceCapacity: { name: String, id: "CumulatedResourceCapacity", nodes: [UUID ₁ , ..., UUID _n], rcld: Type of ressources, amount: <long> }	CumulatedRunningCapacity/ SingleRunningCapacity: { name: String, id: "CumulatedRunningCapacity", nodes: [UUID ₁ , ..., UUID _n], amount: <long> }
Offline / Online/ Quarantine: { name: <String>, id: <Constraint name>, nodes: [UUID ₁ , ..., UUID _n] }	Overbook: { name: <String>, id: "<Constraint name>," nodes: [UUID ₁ , ..., UUID _n], rcld: <Type of ressources>, ratio: <double+> }
Preserved: { name: <String>, id: "<Constraint name>," vms: [UUID ₁ , ..., UUID _n], rcld: <Type of ressources>, amount: <Int> }	Split/ { name: <string>, id: <Constraint name>, vms: [[UUID ₁ , ..., UUID _j], ..., [UUID k, ..., UUID _n]] }
Among { name: <string>, id: <Constraint name>, vms: [<UUID ₁ > ..., <UUID _n >] Node [[UUID ₁ , ..., UUID _j], ..., [UUID k, ..., UUID _n]] }	