CLAIMS

What is claimed is:

1. A method for updating a gateway resource, wherein the method is applicable to an Internet of Things (IoT) control platform connected to each gateway device, and the gateway device is connected to an IoT device, the method comprising:

acquiring a model change message comprising a change model identifier of a changed model, wherein different IoT devices correspond to different models, and each model contains measuring point information of a measuring point in the IoT device;

determining an associated template based on the change model identifier and updating the associated template, the associated template containing a corresponding relationship between the measuring point information and a measuring point identifier in the changed model, and the measuring point identifier being applicable to a measuring point data message sent by the IoT device;

determining a target gateway device that uses the associated template; and

issuing a gateway resource update package to the target gateway device, the target gateway device being configured to update the gateway resource based on the gateway resource update package,

wherein issuing the gateway resource update package to the target gateway device comprises:

constructing the gateway resource update package;

dividing the gateway resource update package into m resource update sub-packages, wherein m is less than a number of the target gateway devices;

issuing the m resource update sub-packages to m ~~of the~~ target gateway devices, the m target gateway devices being configured to perform a deployment test of gateway resource update based on the received resource update sub-packages; and

issuing the gateway resource update package to remaining target gateway devices in response to that the m resource update sub-packages all pass the deployment test.

2. The method according to claim 1, wherein constructing the gateway resource update package comprises:

determining an incremental gateway resource in response to a change in the gateway resource;

acquiring a history total gateway resource of the target gateway device, and constructing a current total gateway resource based on the history total gateway resource and the incremental gateway resource; and

constructing the gateway resource update package based on the current total gateway resource.

3. The method according to claim 2, wherein after acquiring the history total gateway resource of the target gateway device and constructing the current total gateway resource based on the history total gateway resource and the incremental gateway resource, the method further comprises:

calculating a first hash value based on the history total gateway resource, and calculating a second hash value based on the current total gateway resource; and

determining a gateway device to be updated in response to that the first hash value is different from the second hash value.

4. The method according to claim 2, wherein constructing the current total gateway resource comprises:

generating a first resource packaging task and putting the first resource packaging task into a lag queue, the first resource packaging task instructing to construct the current total gateway resource of the target gateway device; and

executing the first resource packaging task in response to completion of a second resource packaging task in a priority queue, the second resource packaging task being a resource construction task triggered manually.

5. The method according to any one of claims 1 to 4, wherein determining the target gateway device that uses the associated template comprises:

determining a target IoT device corresponding to the associated template; and

determining a gateway device connected to the target IoT device as the target gateway device.

6. The method according to any one of claims 1 to 4, wherein issuing the m resource update sub-packages to the m target gateway devices comprises:

issuing an i^{th} resource update sub-package to an i^{th} target gateway device, i being a positive integer less than or equal to m; and

cross-deploying the i^{th} resource update sub-package in response to that the i^{th} resource update sub-package passes a deployment test at the i^{th} target gateway device, wherein during the cross-deployment, the i^{th} resource update sub-package is issued to the target gateway device except for the i^{th} target gateway device.

7. The method according to claim 6, wherein after cross-deploying the i^{th} resource update sub-package, the method further comprises:

rolling back the resource update sub-package in response to that the resource update sub-package fails to pass the deployment test at the target gateway device.

8. An apparatus for updating a gateway resource, wherein the apparatus is applicable to an Internet of Things (IoT) control platform connected to each gateway device, and the gateway device is connected to an IoT device, the apparatus comprising:

a message acquiring module, configured to acquire a model change message comprising a change model identifier of a changed model, wherein different IoT devices correspond to different models, and each model contains measuring point information of a measuring point in the IoT device;

a template updating module, configured to determine an associated template based on the change model identifier and update the associated template, the associated template containing a corresponding relationship between the measuring point information and a measuring point identifier in the changed model, and the measuring point identifier being applicable to a measuring point data message sent by the IoT device;

a gateway determining module, configured to determine a target gateway device that uses the associated template; and

a resource updating module, configured to issue a gateway resource update package to the target gateway device, the target gateway device being configured to update the gateway resource based on the gateway resource update package, wherein the resource updating module includes:

a first update unit configured to construct the gateway resource update package;

a second update unit configured to divide the gateway resource update package into m resource update sub-packages, wherein m is less than a number of the target gateway devices;

a third update unit configured to issue the m resource update sub-packages to ~~the~~ m target gateway devices, the m target gateway devices being configured to perform a

deployment test of gateway resource update based on the received resource update sub-packages; and

a fourth update unit configured to issue the gateway resource update package to the remaining target gateway devices in response to that the m resource update sub-packages all pass the deployment test.

9. An Internet of Things (IoT) control platform, comprising a processor and a memory storing at least one instruction, at least one program, a code set, or an instruction set, wherein the at least one instruction, the at least one program, the code set, or the instruction set, when loaded and executed by the processor, causes the processor to perform the method for updating the gateway resource as defined in any one of claims 1 to 7.