

FIG. 1

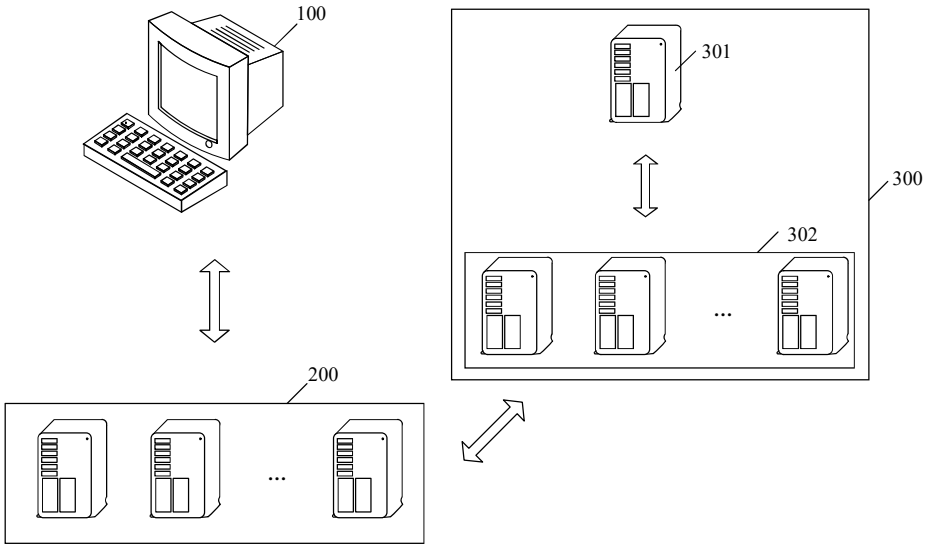


FIG. 2

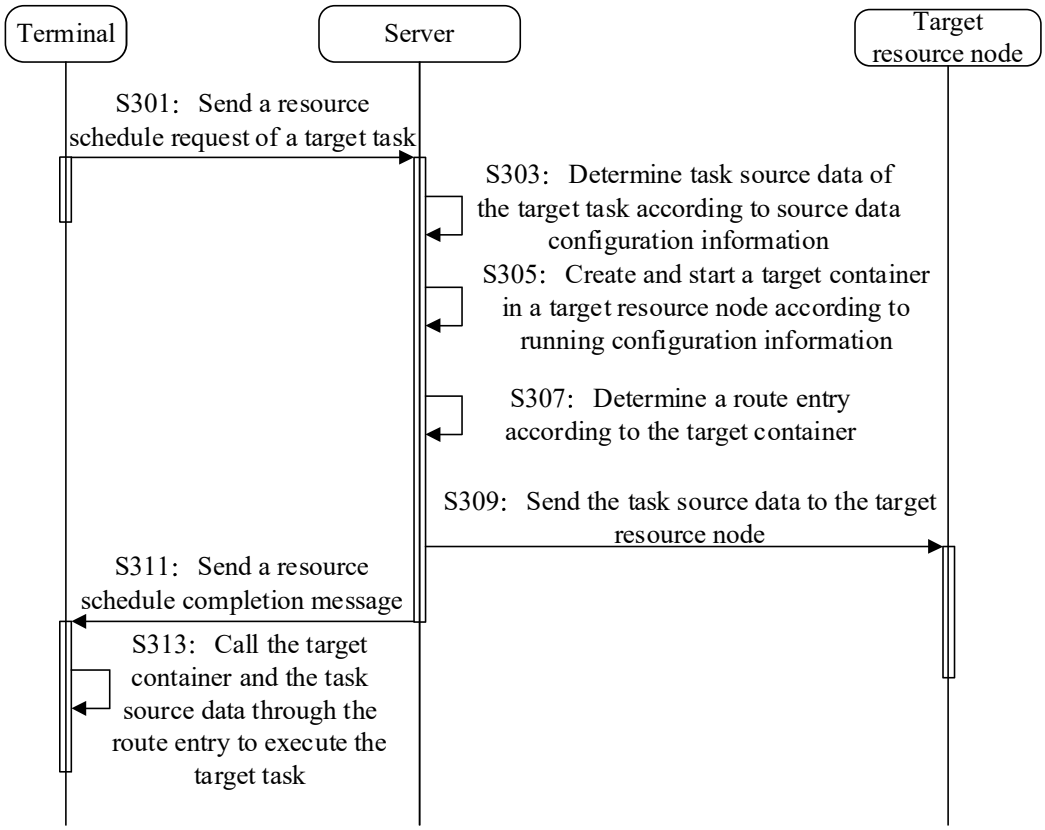

Terminal
Server
Target resource node
S301: Send a resource schedule request of a target task
S303: Determine task source data of the target task according to source data configuration information
S305: Create and start a target container in a target resource node according to running configuration information
S307: Determine a route entry according to the target container
S309: Send the task source data to the target resource node
S311: Send a resource schedule completion message
S313: Call the target container and the task source data through the route entry to execute the target task

FIG. 3

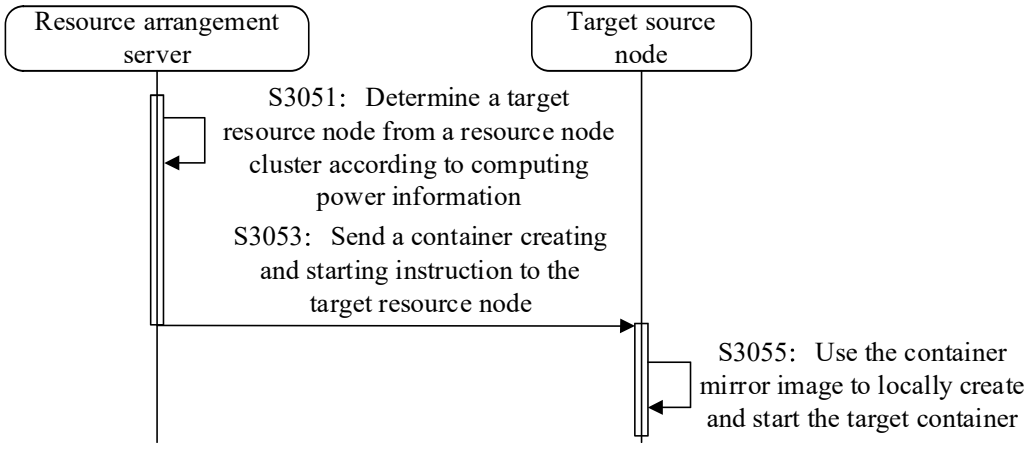

Resource arrangement server
Target source node
S3051: Determine a target resource node from a resource node cluster according to computing power information
S3053: Send a container creating and starting instruction to the target resource node
S3055: Use the container mirror image to locally create and start the target container

FIG. 4

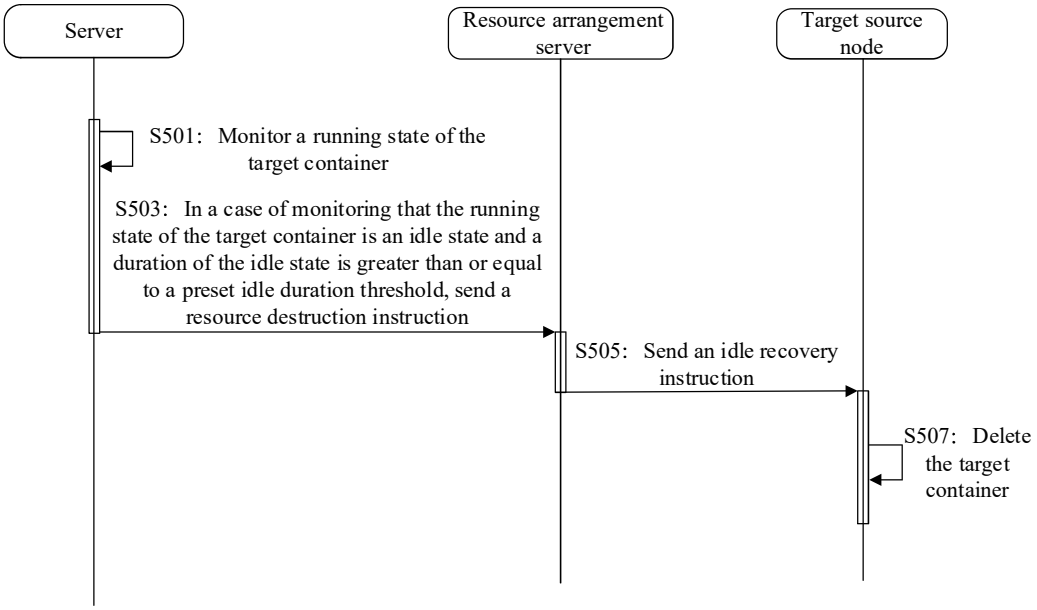

Server
Resource arrangement server
Target source node
S501: Monitor a running state of the target container
S503: In a case of monitoring that the running state of the target container is an idle state and a duration of the idle state is greater than or equal to a preset idle duration threshold, send a resource destruction instruction
S505: Send an idle recovery instruction
S507: Delete the target container

FIG. 5

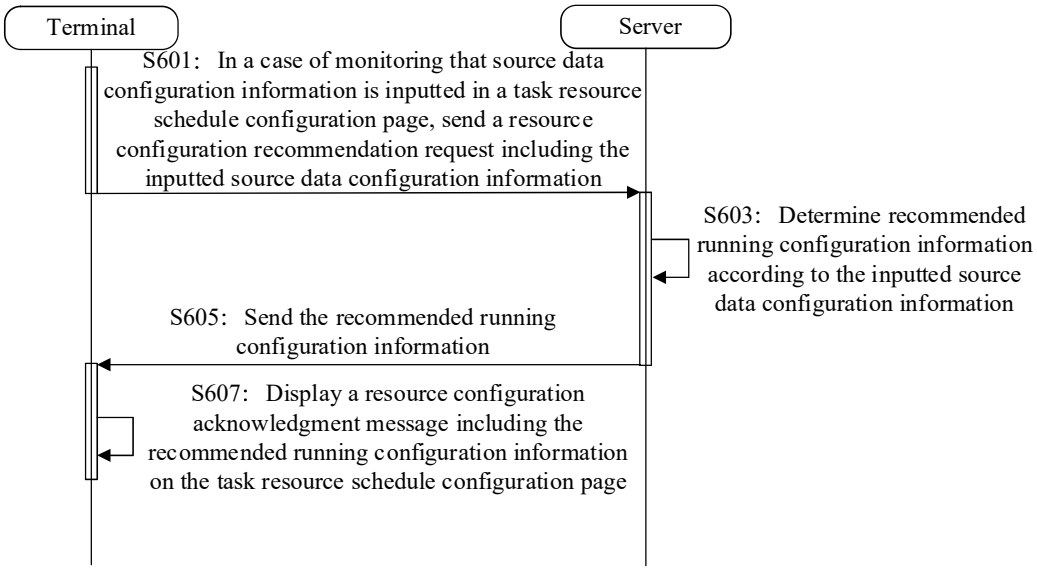

Terminal
Server
S601: In a case of monitoring that source data configuration information is inputted in a task resource schedule configuration page, send a resource configuration recommendation request including the inputted source data configuration information
S603: Determine recommended running configuration information according to the inputted source data configuration information
S605: Send the recommended running configuration information
S607: Display a resource configuration acknowledgment message including the recommended running configuration information on the task resource schedule configuration page

FIG. 6

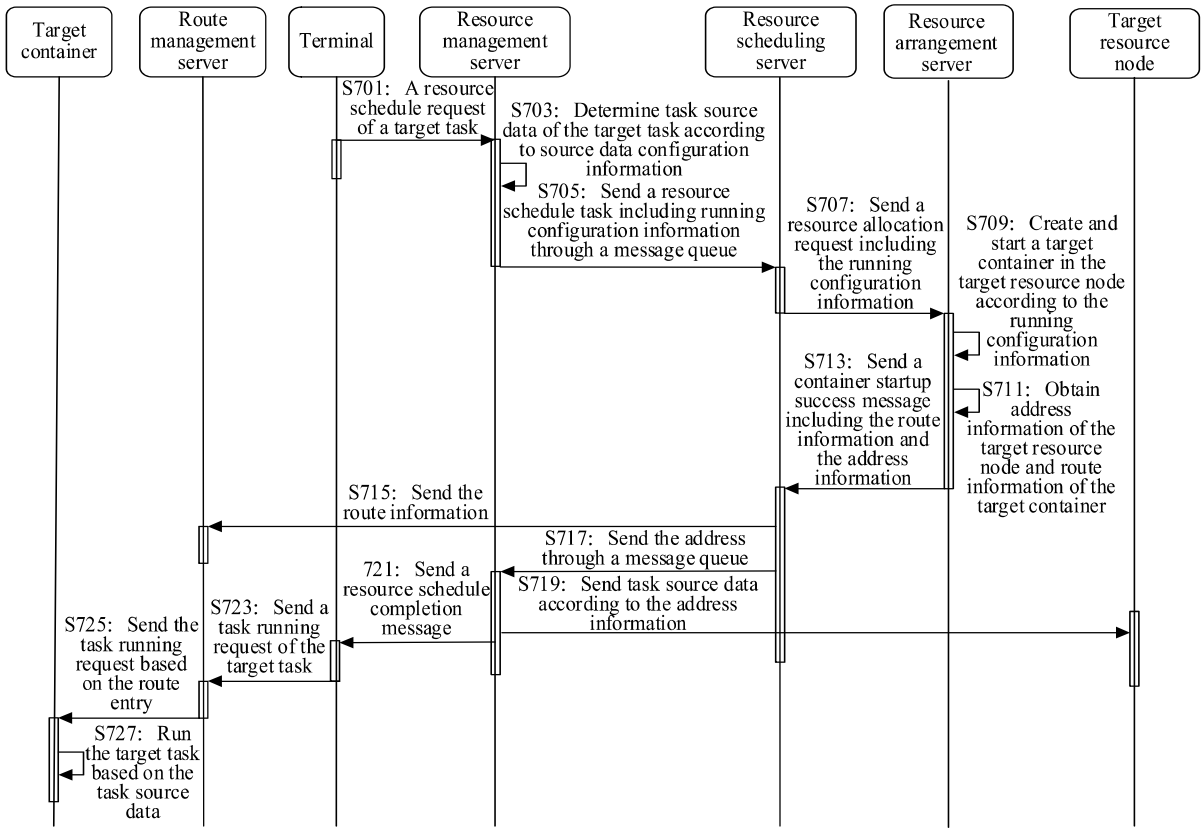

Target container
Route management server
Terminal
Resource management server
Resource scheduling server
Resource arrangement server
Target resource node
S701: A resource schedule request of a target task
S703: Determine task source data of the target task according to source data configuration information
S705: Send a resource schedule task including running configuration information through a message queue
S707: Send a resource allocation request including the running configuration information
S709: Create and start a target container in the target resource node according to the running configuration information
S711: Obtain address information of the target resource node and route information of the target container
S713: Send a container startup success message including the route information and the address information
S715: Send the route information
S717: Send the address through a message queue
S719: Send task source data according to the address information
721: Send a resource schedule completion message
S723: Send a task running request of the target task
S725: Send the task running request based on the route entry
S727: Run the target task based on the task source data

FIG. 7

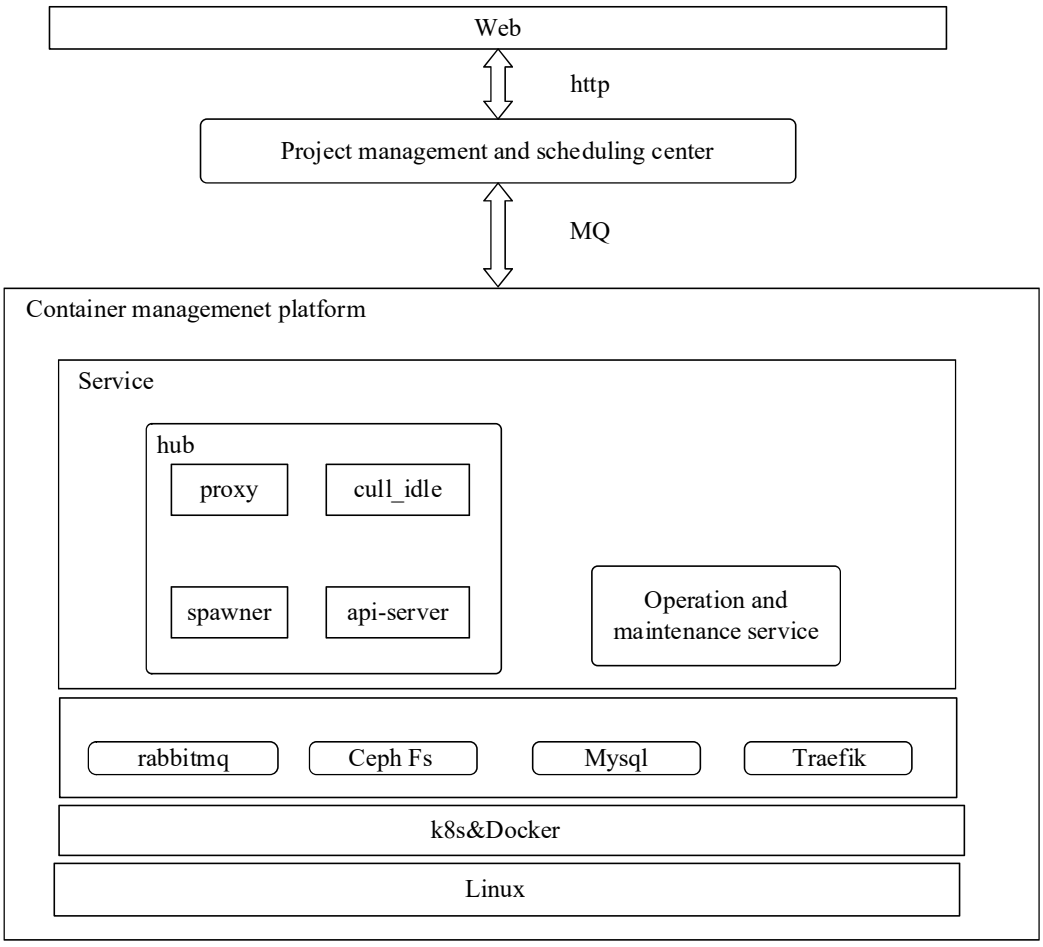

Web
http
Project management and scheduling center
MQ
Container managemenet platform
Service
hub
proxy
cull_idle
spawner
api-server
Operation and maintenance service
rabbitmq
Ceph Fs
Mysql
Traefik
k8s&Docker
Linux

FIG. 8

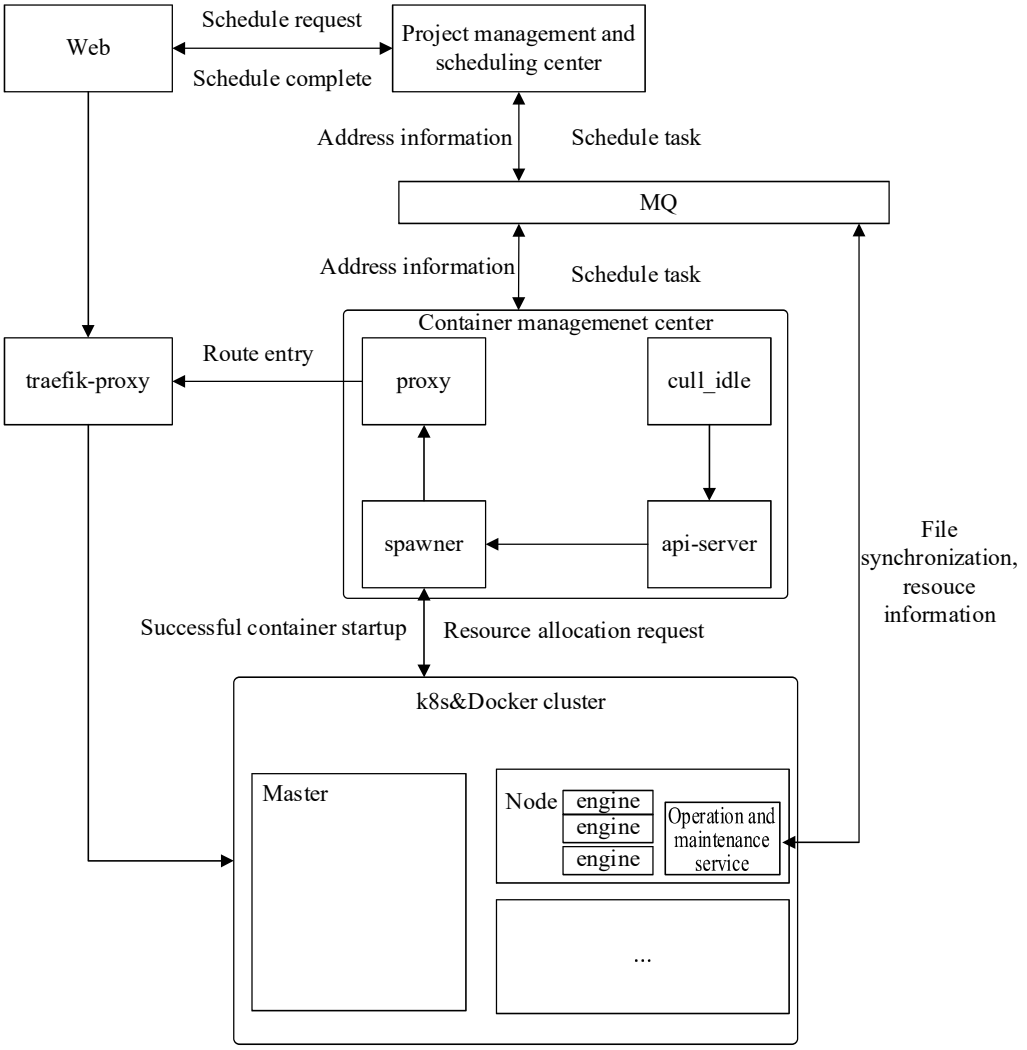

Web
Schedule request
Schedule complete
Project management and scheduling center
Address information
Schedule task
MQ
Address information
Schedule task
Container managemenet center
traefik-proxy
Route entry
proxy
cull_idle
spawner
api-server
File synchronization, resouce information
Successful container startup
Resource allocation request
k8s&Docker cluster
Master
Node
engine
engine
engine
Operation and maintenance service
...

FIG. 9

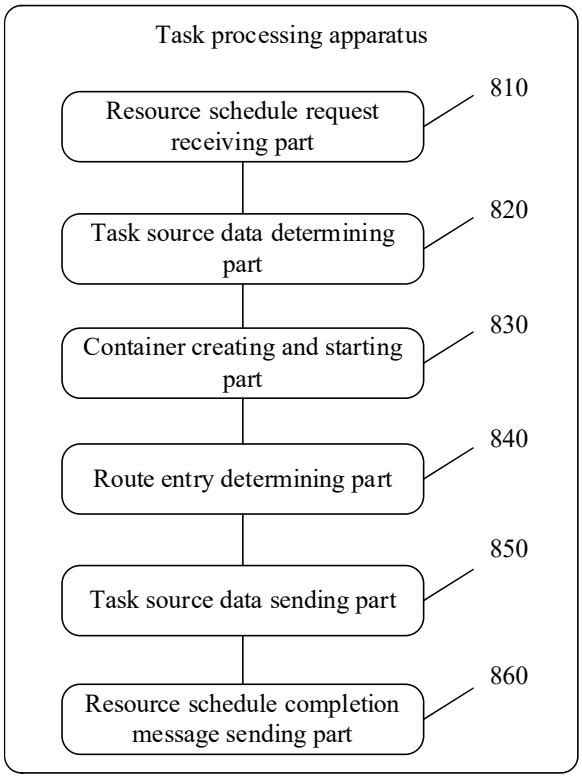

Task processing apparatus
Resource schedule request receiving part
810
Task source data determining part
820
Container creating and starting part
830
Route entry determining part
840
Task source data sending part
850
Resource schedule completion message sending part
860

FIG. 10

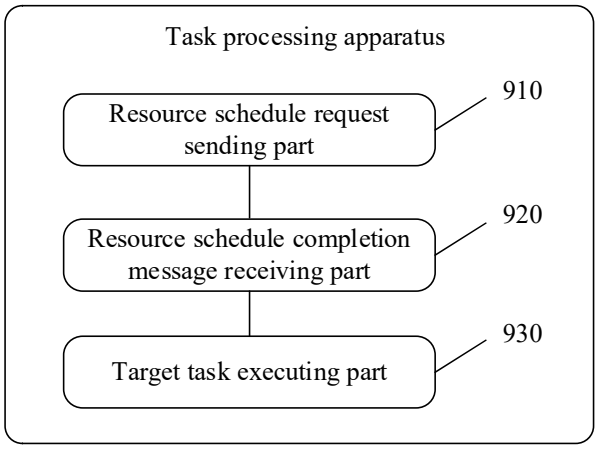

Task processing apparatus
Resource schedule request sending part
910
Resource schedule completion message receiving part
920
Target task executing part
930

FIG. 11

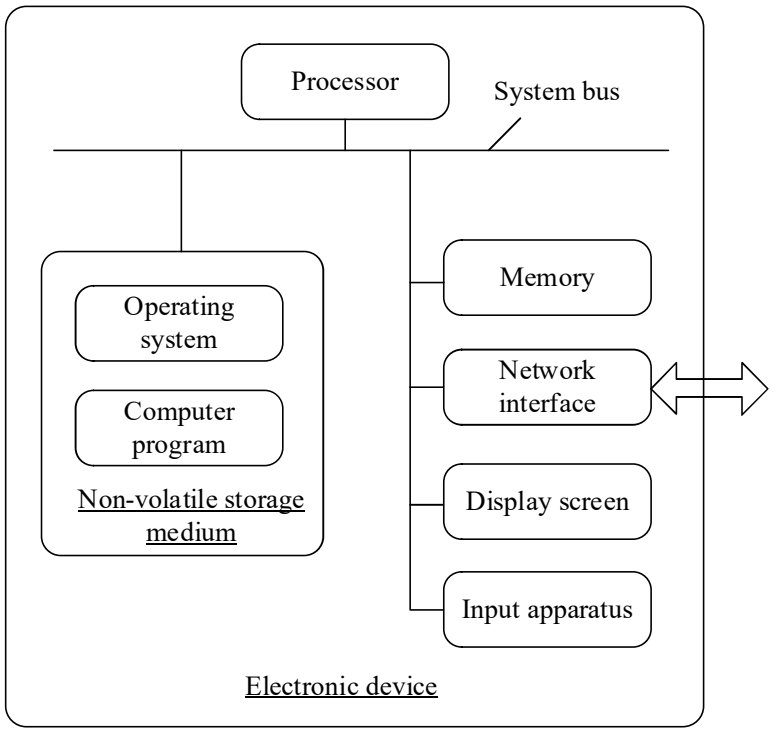

Processor
System bus
Memory
Operating system
Network interface
Computer program
Non-volatile storage medium
Display screen
Input apparatus
Electronic device

FIG. 12

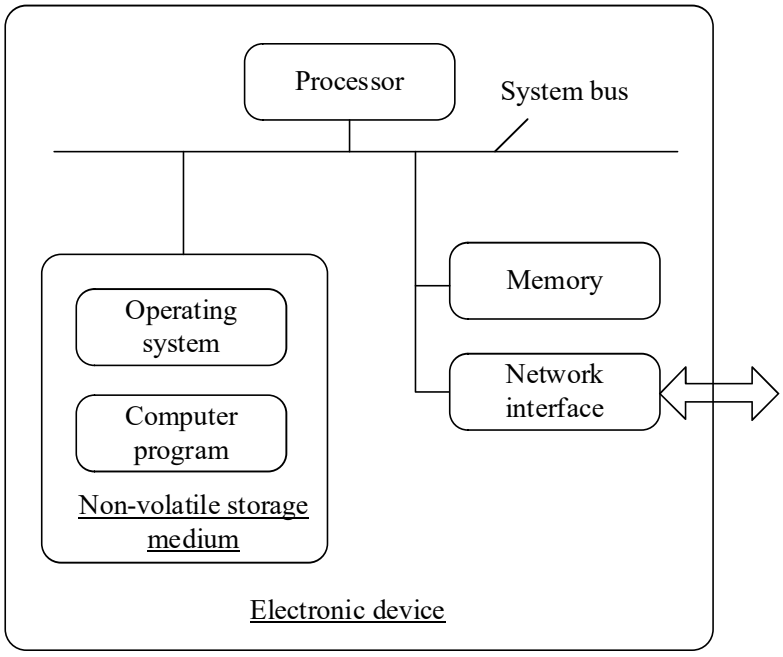

Processor
System bus
Memory
Operating system
Network interface
Computer program
Non-volatile storage medium
Electronic device

FIG. 13