

CLAIMS

1. A local dynamic location information updating and querying method for a mobile network entity, wherein in the method, a distributed container with a hierarchical nested structure is adopted to handle with the registration and query of location information of a network entity, after the network entity is connected to a network attachment point after movement and allocated with a new network address, the new location information of the network entity is registered onto the container where the network entity is currently located, the position information at least contains the current network address information of the network entity, and the method comprises:

step 1) when a network entity registers new location information onto a container where the network entity is currently located, updating and publishing, by the current container, the new location information to the container where the network entity is located before the movement;

step 2) when a network forwarding device learns that the network entity is not currently reachable, querying the container where the network entity is located before the movement for the new location information of the network entity; upon receipt of the query request by the container where the network entity is located before the movement, acquiring the new location information of the network entity by querying within the container itself; and

step 3) according to the new location information of the entity obtained by the querying, modifying, by the network forwarding device, network address information in the communication session message and forwarding the session message; wherein step 1) specifically comprises:

step 101) sending, by the network entity, registration information to the container CM_{new} where the network entity is currently located, wherein the registration information content at least includes: network entity name, current valid location information, release serial number, and addressing information of the container CM_{old} where the network entity is located before the movement;

step 102) after the container CM_new receives the registration information, judging whether the release serial number in the registration information is updated, if so, then turning to step 103), otherwise, returning with failed registration, and ending the processing;

step 103) updating, by the container CM_new, the corresponding entity location information and release serial number information managed and stored in the present container, returning the processing result to the network entity, wherein the processing result includes addressing information of the CM_new container; and saving, by the network entity, the received addressing information of the CM_new container;

step 104) judging, by the CM_new container, whether the CM_new container itself and the CM_old in the registration information are the same container, if so, then ending the processing, otherwise, performing step 105);

step 105) sending, by the CM_new container, the registration information received this time to the CM_old container; and

step 106) after receiving the above registration information, judging, by the CM_old container, whether the release serial number of the network entity name is newer than the serial number information currently stored in the present container, if so, then updating the entity location information and release serial number managed and stored in the present container; otherwise, performing no updating and publishing.

2. The local dynamic location information updating and querying method for a mobile network entity of claim 1, wherein the release serial number is maintained by the network entity, and is updated along with each release.

3. The local dynamic location information updating and querying method for a mobile network entity of claim 1, wherein the addressing information of the container is the identifier or network address of the container.