

## RiposteDefineNode

The **RiposteDefineNode** function is used to define the neighboring message server.

```
unsigned long RiposteDefineNode (  
    unsigned long dwGroupId,  
    unsigned long dwNodeId,  
    unsigned char *szAddress,  
    unsigned long dwProtocol,  
    unsigned long fPermanent,  
    unsigned long fLocal  
);
```

### Parameters

#### *dwGroupId*

The group identifier of the neighbor being defined. If the neighbor being defined is a correspondence server and the host message server is also a correspondence server then *dwGroupId* should be set to zero. If the neighbor being defined is a correspondence server and the host message server is not a correspondence server, *dwGroupId* should be set to the group identifier of the host message server. Note that in the latter case, the correspondence server appears to the host message server as if it were just another member of the local group.

#### *dwNodeId*

The node identifier of the neighbor being defined.

#### *szAddress*

A null-terminated string containing the network address of the neighbor. For the UDP/IP protocol this should be an internet address, e.g. "205.161.44.1". This string must not be longer than **RIPOSTE\_NET\_ADDRESS\_LEN-1**.

#### *dwProtocol*

The network protocol used to communicate with the neighbor. Currently the only supported protocol is **RIPOSTE\_UDP\_PROTOCOL**.

#### *fPermanent*

A boolean flag indicating whether the connection to the neighbor is permanent or not. See the remarks below for more details.

#### *fLocal*

A boolean flag indicating whether the neighbor is considered local or remote. If *fLocal* is set to TRUE then the neighbor is assumed to be on the same LAN as the host message server, implying that (1) high bandwidth (10 Mbs or greater) is available to the neighbor and that (2) IP Multicasting is efficiently supported. If *fLocal* is set to FALSE then the neighbor is assumed to not be on the same LAN as the host message server implying that the bandwidth available to the neighbor may be limited (typically 9600 bps to 128Kbs).

### Return Values

The function returns 0 if successful, otherwise it returns an error code which may be a Riposte error code, an RPC error code, or a Windows NT error code. Use [RiposteErrorString](#) to get a text description of the error.

### Remarks

RiposteDefineNode is used to define the neighbors of the host message server. The set of neighbors of the host message server defines the local topology of the network. A message server must have at least one neighbor in order for it to be able to replicate messages and recover from the loss of the host message store. For a correspondence server, at least one of its neighbors must be another correspondence server in order for it to be able to recover from the loss of the host message

store.

Neighbor definitions are stored in the registry, but the registry entries should never be modified directly. Use only **RiposteDefineNode** and [RiposteUndefineNode](#) to modify neighbor definitions. Note that once a neighbor has been defined, the only way to change the neighbor definition is to first remove it using [RiposteUndefineNode](#) and then redefine it.

Riposte message replication is accomplished in two ways, (1) via the broadcasting of messages as they are created, and (2) via the exchange of marker messages, which may trigger synchronization between two message servers. The way in which a neighbor is defined affects how and when these two types of messages are sent to neighbors.

For a neighbor which is permanent, any messages which are created or broadcast messages which are received by the host message server will be forwarded to this neighbor immediately. In addition, the host message server will exchange marker messages with the neighbor at regular intervals. The length of this interval depends on whether the neighbor is local or remote, and on the configuration items [LocalBroadcastInterval](#) and [RemoteBroadcastInterval](#).

For a neighbor which is not permanent, the connection with the neighbor is in one of two states, connected or disconnected. Note that all Riposte messaging is based on a connectionless protocol (UDP/IP), so this state is simply an internal variable that controls how and when messages are sent, it does not have a direct correspondence with the network. When the neighbor is connected, it is effectively treated like a permanent neighbor, where the marker exchange interval is determined by the configuration item [ConnectedBroadcastInterval](#). When the neighbor is not connected, normal broadcast messages are not forwarded to the neighbor unless they are priority broadcasts, in which case the neighbor is put into a connected state and the priority broadcast message is forwarded (see [RiposteCreatePriorityMessage](#) for more details). In addition, when the neighbor is not connected, markers are exchanged at an interval determined by the configuration item [DisconnectedBroadcastInterval](#), and only when the state of the host message store has changed since the last time a marker was sent to the neighbor. Thus if no new messages are created on either the host message server or the non-permanent neighbor, then there will be no communication between them.

Neighbor definitions must be symmetric, i.e. if node A is defined as a neighbor of node B, then node B must be defined as a neighbor of node A. No messages will be successfully exchanged between nodes A and B unless both definitions exist. Furthermore, *dwProtocol*, *fPermanent*, and *fLocal* must be set in the same way in both definitions. If this is not the case the results are undefined.

Note that the caller of this function must have permission to modify the neighbor definition keys in the registry on the host machine. By default permission is granted only to NT Administrators and the NT System account.

## See Also

[RiposteGetNodeInfo](#), [RiposteUndefineNode](#)

[Riposte32 Constants](#), [Riposte32 Functions](#), [Riposte32 Configuration And Administration Functions](#)

Copyright © 1997, Escher Group Ltd., Cambridge, Massachusetts