Network Table Changes

Commentary

Mon, Jul 8, 2002

Code organization for table lookups

All of the table lookup routines are located in the `IPNODGS` module, for "IPNOD Gets and Sets." Changes were made to other modules in the system to invoke these routines.

Module	*Purpose*
`InzSys`	Declare new 16-bit system global `IPNODDSX`, at offset –80.
`InzPSOS`	Call `InzIPNOD` after calling `DSInit` to initialize data streams.
`Update`	Call `MonIPNOD` just before processing Data Access Table
`IPARP`	In `PsnIPARP`, call `GetPNode` before search loop, when possible
	In `PsnIPARP`, call `SetPNode` when establishing new IPARP entry.
	In `NodIPARP`, call `SetANode` when writing `NodeN` field of IPARP entry.
	In `TimIPARP`, call `SetPNode` when clearing IPARP entry after timeout.
`IPNodeN`	In `IPNodeN`, call `GetIPADD` to avoid search, if possible.
	In `GtNodeN`, call `GetNNode` to avoid search of IPNAT, if possible.
	In `FindUDP`, call `GetIPADD`, `GetANode` to avoid search of TRUNK, if ok.
`IPNODGS`	New module containing all the new routines that support this feature.

In addition, changes were made for support of execution time diagnostics.

Module	*Purpose*
`IPARP`	Add execution time diagnostic via call to `IPTLOG`.
`IPNodeN`	Add execution time diagnostics for `IPNodeN`, `GtNodeN`, `FindUDP`.
`IPNODGS`	Add execution time diagnostic for `InzIPNOD`. Add `IPTLOG`, `MicroSec`.

The `IPNODLOG` data stream is configured in DSTRM[8] as follows:

```
0001 0010 0028 1000  Note 40 bytes of user area
0000 D000 0000 0000  Data stream queue at 0000D000
4950 4E4F 444C 4F47  'IPNODLOG'
0000 0000 0000 0000
```

The new global variable appears at

`00000F30 C008` This means both flag bits are set, and d.s. index = 8.

An example look at the data stream queue header including timing diagnostics, records:

```
0509:00D000 0001 0010 0018 1000
0509:00D008 0000 0003 0000 0000
0509:00D010 0070 1000 0040 0070
0509:00D018 0000 3520 0000 0000  00003520 = 13.6 ms
0509:00D020 6051 40FF 00B2 0018  PsnIPARP timing 24 µs
0509:00D028 0642 0071 00BE 0037  IPNodeN timing 55 µs
0509:00D030 0642 0AA7 002D 000D  GtNodeN timing 13 µs
0509:00D038 0985 0002 0010 000D  FindUDP timing 13 µs
0509:00D040 83E1 10EC 0B55 0B50  Record of duplicate TRUNK entry
0509:00D048 0207 0808 2730 0738
0509:00D050 0000 0000 0000 FF41  AAUX open for business
0509:00D058 0207 0808 2730 0701
0509:00D060 0000 0000 0000 FF4E  DNSQ open for business
0509:00D068 0207 0808 2730 071A
```