

## Bulk Statistics File Format

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StrataView Plus collects statistics from IPX, BPX, FastPAD, DNS, and AXIS nodes using Trivial File Transfer Protocol (TFTP). To collect statistics collected so far from a node, StrataView Plus uses TFTP to request (GET) the statistics from that node. The requested node responds by transmitting the statistics, in bulk, to StrataView Plus in a statistics collection file.

The statistic values received are used to update the StrataView Plus database and the user can examine these statistics directly in the database as described in the body of this manual.

The statistics collection file received by StrataView Plus provides an alternative method by which the statistics values can be examined by the user. Knowing the file name and format, the user can parse the file to extract the value of each statistic type.

### File Name

Each statistics collection file received from a node is uniquely identified in SV+ using a filename conventions as follows:

Filename = *Nodename.mmddyyhhmm*

where,

*Nodename* is the name of the node from which the statistics were collected.

*mmddyyhhmm* is the date and time in GMT when the statistics were collected

### File Format

As indicated in the lists of statistic types in Chapter 3, each type of statistic collected in StrataCom networks is categorized under a major grouping known by an object type name and an object type number and minor grouping known as a sub-type. Within the sub-type, the statistic has a statistic type number.

For example, the statistic “ATM Cell Header HEC Errors” has an object type name of IPX-ATM, an object type of 2, a sub-type of 1 and a statistic type of 45. This combination of groups and type number uniquely identify a particular type of statistic.

The format of the statistics collection file consists of a fixed length header and a sequential string of statistics identified by their object type, sub-type and statistic type. The specific file format is shown in Table A-1

**Table A-1      Format of statistics collection file**

| <b>Field Description</b>   | <b>Field Size</b> |
|--|-------------------|
| <b>Fixed Header Section</b>  |                   |
| Domain number of node  | 1 byte            |
| Node number  | 1 byte            |
| Release number (example, 725a for release 7.2.5.A)                   | 4 bytes           |
| Status byte  | 2 bytes           |
| Peak Flag (1=enabled, 0=disabled)                                    | 1 byte            |
| Bucket interval  | 1 byte            |
| Number of Object Types   | 1 byte            |
| <b>Data Dependent Section</b>  |                   |
| Object Type identifier   | 1 byte            |
| Number of Object Sub-types   | 1 byte            |
| Object Sub-type identifier   | 1 byte            |
| Number of Instances of Key   | 2 bytes           |
| Key instance   | variable length*  |
| Stat type count  | 1 byte            |
| Stat type  | 1 byte            |
| Number of buckets  | 1 byte            |
| Stat value<br>reverse chronological order                            | 4 bytes           |
| Peak value<br>1st bucket = file time stamp                           | 4 bytes           |
| Repeat Stat type, Stat value and Peak value for<br>number of buckets | n bytes           |
| Repeat Object Sub-type identifier section                            | n bytes           |
| Repeat Object type section   | n bytes           |

Table A-2 (Object Sub-types to Key List) depicts the keying information based upon Object Sub Type.

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**Table A-2      Object Sub-Type to Key List**

| <b>Object Sub-type</b>  | <b>Key Field 1</b> | <b>Key Field 2</b> | <b>Key Field 3</b> | <b>Key Field 4</b> |
|---|--------------------|--------------------|--------------------|--------------------|
| IPX Frame Relay Connection                                    | Slot               | Channel            | DCLI, 2 bytes      | N/A                |
| IPX Voice Connection  | Slot               | Channel            | N/A                | N/A                |
| IPX Data Connection   | Slot               | Channel            | N/A                | N/A                |
| ATM Connection ASI  | Slot               | Port               | VPI, 2 bytes       | VCI, 2 bytes       |
| ATF Connection BPX Local                                      | Slot               | Port               | DCLI, 2 bytes      | N/A                |
| ATF Connection IPX Local (ATM for AIT card)                   | Slot               | Port               | DCLI, 2 bytes      | N/A                |
| FastPAD Connection (includes Voice, Switched Voice, and Data) | Slot               | Port               | FP Slot            | FP Port            |
| ASI Line (Service interface)                                  | Slot               | Port               | N/A                | N/A                |
| IPX Service Interface (T1/E1)                                 | Line               | N/A                | N/A                | N/A                |
| IPX Trunk, includes ATM and AIT cards                         | Line               | N/A                | N/A                | N/A                |
| IPX Frame Relay Port  | Slot               | Port               | N/A                | N/A                |
| ASI Port  | Slot               | Port               | N/A                | N/A                |
| FTC Port (FastPAD)  | Slot               | Port               | N/A                | N/A                |

All key fields are 1 byte in length unless otherwise noted.

