10/08/07 - #20 - zTidBits Q&A (capture fault events)

Inquiry:
Does anyone know if there is a way to see fault events from Z series?

Response:
z/OS can record and stage events in several locations depending on the type. Here is the short list to capture those incidences.

* **System Management Facility** (SMF) to capture certain fault events written to a special dataset SYS1.MANxx depending on the record type and whether that record is enabled in the zOS configuration. The SMF records contain a variety of information that enables you to produce many types of analysis reports and summary reports so that you can evaluate changes in configuration, workload, or job scheduling procedures by studying the trends in the data.
You can also use SMF data to determine system resources wasted because of event problems such as inefficient operational procedures or programming conventions.

* **LOGREC data -** The LOGREC data set contains statistical data about machine failures (processor failures, I/O device errors, channel errors). It also contains records for program error recording, missing interrupt information, and dynamic device reconfiguration (DDR) routines. In general, all records on the logrec data set contain a standard 24-byte header followed by data that is specific for the record type and the device type or machine model. The header provides the information necessary to identify the type and origin of the record. There are a dozen or so types and broken down as:
- Type information which defines the specific type of record, the specific source of the record, the general reason the record was made, and any special record-dependent attributes (such as record length, content, hardware features, format).
- Origin information which includes the operating system the record was generated on, the generating program, the time and date the record was generated, the processor identity, and the processor serial number on which the record was generated. For a multi-processor system, the processor that generated the record may not be the processor on which the incident occurred.

* **SYSLOG data** - This data set resides in JES2's spool space. It can be used by application and system rogrammers to record communications about problem fault programs and system functions. It also contains a record of console messages and operator commands for audit and diagnosis purposes.

* **System DUMP data sets** - These are sequential data sets which contain system dumps that record areas of virtual storage in case of system task failures.