# Codeit异常信息说明

Codeit异常等级分为三类：

{FATAL, ERROR, WARNING}

FATAL:致命性错误，出现该类异常时，系统需要重启方可继续运行，比如实时线程启动失败，EtherCAT主站启动失败等。

ERROR：一般性错误，用户需通过Clear指令清楚该类错误，比如机器人关节超限，速度超限，进入了干涉区等。

WARNING：警告信息，用户不需要做任何处理，针对警告信息来做调整修改即可，比如输入参数维数不对等。

在一个指令中的prepareNrt()增加异常信息。先将此信息注册到

errorinfoPool->add<cErrorInfo>

("an exception", -10, "WARNNING", "一个异常出现", "an exception exists");

"an exception":键值

-10:错误码

"WARNNING"：异常等级

"一个异常出现"：中文异常提示信息

"an exception exists"：英文异常提示信息

然后可通过如下方式在prepareNrt()中需要抛出异常的地方调用：

THROW\_FILE\_LINE("an exception")

若在executeRT或executeNrt()中增加异常信息，先按如下进行注册：

errorinfoPool->add<codeit::system::ErrorInfo>

("plan over time", -2001, "ERROR", "规划超时", "plan over time");

errMap.insert(pair<std::int32\_t, string>(-2001, "plan over time"));

"plan over time":键值

-2001：错误码，错误码需在-2000~-100000直接

"ERROR"：错误等级

"规划超时"：中文异常提示信息

"plan over time"：英文异常提示信息

然后可在该函数体内通过return错误码的信息把异常抛出

return -2001;

collectNrt()相当于析构函数，不得抛出异常

指令的返回值：

enum RetStatus : std::int32\_t

{

EXECUTED = 1,

SUCCESS = 0,

PARSE\_EXCEPTION = -1,

PREPARE\_EXCEPTION = -2,

SERVER\_IN\_ERROR = -10,

SERVER\_NOT\_STARTED = -11,

COMMAND\_POOL\_IS\_FULL = -12,

PREPARE\_CANCELLED = -40,

EXECUTE\_CANCELLED = -41,

SLAVE\_AT\_INIT = -101,

SLAVE\_AT\_SAFEOP = -102,

SLAVE\_AT\_PREOP = -103,

SLAVE\_AT\_OP = -104,

MOTION\_NOT\_ENABLED = -501,

MOTION\_POS\_BEYOND\_MIN = -502,

MOTION\_POS\_BEYOND\_MAX = -503,

MOTION\_POS\_NOT\_CONTINUOUS = -504,

MOTION\_POS\_NOT\_CONTINUOUS\_SECOND\_ORDER = -505,

MOTION\_POS\_FOLLOWING\_ERROR = -506,

MOTION\_VEL\_BEYOND\_MIN = -507,

MOTION\_VEL\_BEYOND\_MAX = -508,

MOTION\_VEL\_NOT\_CONTINUOUS = -509,

MOTION\_VEL\_FOLLOWING\_ERROR = -510,

MOTION\_INVALID\_MODE = -511,

MOTION\_IN\_INTRNG = -512,

////\*\*\*新定义的错误码，-1000~-10000之间，需加入errMap中

PLAN\_OVER\_TIME = -1001,

FORWARD\_KINEMATIC\_POSITION\_FAILED = -1002,

INVERSE\_KINEMATIC\_POSITION\_FAILED = -1003,

WRIST\_SINGULARITY = -1004,

SHOULDER\_SINGULARITY = -1005,

ELBOW\_SINGULARITY = -1006,

SINGULARITY = -1007,

THREE\_POINTS\_COLLINEAR = -1008,

NO\_MOVEJ\_PLANNER = -1100,

NO\_MOVEL\_PLANNER = -1101,

NO\_MOVEC\_PLANNER = -1102,

NO\_MOVES\_PLANNER = -1103,

NO\_MOVELL\_PLANNER = -1104,

NO\_SERVOJ\_PLANNER = -1104,

PROGRAM\_EXCEPTION = -2000,

};