Application Code int call() prepare call arguments **AEX Path** ► TCS try { CSSA **Enclave Code** EENTER **OENTRY** void entry() RCX: AEP RBX: TCS RCX set by store call results **ERESUME** catch (AEX e) read ESP from FS:TLS Resumable Yes PUSH RCX exception? perform enclave No computation POP RBX return ERROR; EEXIT ERESUME RCX: AEP RBX: TCS store call results **Synchronous AEX Execution Path** return SUCCESS; } SSA Ring 0 Stack **XSAVE** System Software Hardware Exception Handler **GPRs GPRSGX** void handler() Code **AEP** save GPRs **RIP** U RBP handle exception **U_RSP** CS restore GPRs **RFLAGS** Registers IRET **RSP** cleared } by AEX SS