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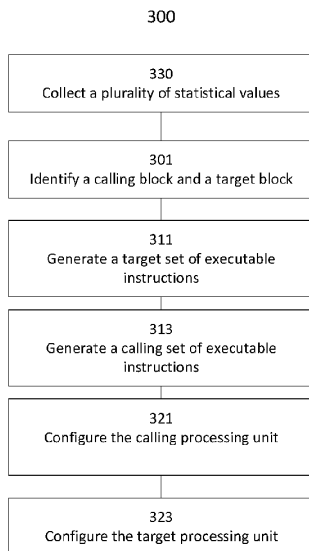


FIG. 3

(57) Abstract: An apparatus for executing a software program, comprising processing units and a hardware processor adapted for: in an intermediate representation of the software program, where the intermediate representation comprises blocks, each associated with an execution block of the software program and comprising intermediate instructions, identifying a calling block and a target block, where the calling block comprises a control-flow intermediate instruction to execute a target intermediate instruction of the target block; generating target instructions using the target block; generating calling instructions using the calling block and a computer control instruction for invoking the target instructions, when the calling instructions are executed by a calling processing unit and the target instructions are executed by a target processing unit; configuring the calling processing unit for executing the calling instructions; and configuring the target processing unit for executing the target instructions.

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