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Raising the [Verification] Bar: Cloud-based Simulation Increases Verification Efficiency

Abstract:

Today's SoC designs require increasing amounts of simulation cycles, driving the need for more compute resources. An increasing number of users are seeking solutions that take advantage of the elastic hardware scalability offered in the cloud to address peak/burst RTL simulation capacity requirements, enabling accelerated coverage closure and shortening time to market. Moving simulation workloads to the cloud however, brings a unique set of challenges, such as hardware instance selection, file system configuration, job orchestration, data analytics and debug. Synopsys and AWS have recognized customers are challenged to understand how to even get started with running run simulation on the cloud.

In this tutorial, architects from AWS, verification experts from Synopsys, and customers running simulation on the cloud will discuss these challenges and demonstrate a software development kit (SDK) including all the scripts required to setup a complete verification environment on the AWS. A joint solution between AWS and Synopsys has been developed to help customers bring their verification environments to AWS. This hands-on tutorial will include all the components essential to develop, compile, run and debug simulations in a cloud environment optimized for verification workloads. We will demonstrate how customers can easily deploy the Synopsys Verification Continuum® platform on AWS, making it easy to select the compute architecture of their choice, such as AMD EPYC, Arm-based AWS Graviton2, or Intel Xeon processors.