

# Cloud Computing for Financial Risk Modeling

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RISK SOLUTIONS | PRODUCT SHEET

*With the advent of the speed and affordability of cloud computing, stochastic simulations for financial risk modeling can be run at a level of sophistication that has never before been practical.*

## Processing Power in the Cloud

As financial risk modeling becomes more sophisticated, the demands on companies' computing infrastructure increases. Robust modeling of global economies, capital markets, financial instruments, and complex corporate holdings across tens or hundreds of thousands of scenarios requires an enormous amount of computing power, and ambitious modelers may find themselves having to choose between long run times and maintaining large grids of high-powered servers.

If simulation results were needed on an everyday basis, the natural solution would be to bring such computing power in-house, but what about companies that require complex model runs on a more infrequent or project-oriented basis? Do they assemble expensive dedicated grids only to have them lie idle in between simulations? Do they try to leverage existing infrastructure, competing for "server time" with other areas within their company?

With cloud computing, computing power becomes available on demand – a service ready to be turned on when it's needed, with no cost of ownership when it's not. Moreover, because of economies of scale, simulations can be run at a speed that would be prohibitively expensive to achieve with a dedicated in-house system, enabling larger and, therefore, more informative simulations than were previously practical.



## Security & Reliability

Conning's cloud computing is powered by Amazon Web Services, which offers 99.99% availability and 99.9999999% durability of data objects. The Conning Grid-as-a-Service module provides each client with an isolated Virtual Private Cloud and dedicated application stack that are robustly protected by firewalls with an IP address whitelist, an SSL certificate, and two-factor authentication. Data is encrypted both while in transit and while at rest. It's worth noting that cloud computing environments have much more stringent security protocols than typical in-house data centers, minimizing cyberattack risk.

With release 7.0 of its award-winning\* risk management software platform, Conning's GEMS® Economic Scenario Generator, FIRM® Portfolio Analyzer, and ADVISE® Enterprise Risk Modeler are now fully cloud computing capable, powered by Amazon Web Services. Clients can build their model in-house and buy computing power for simulation runs when they need it, with all the licensing and systems administration handled by Conning.

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*Applicable to property/casualty, life/pension, health, and multi-sector insurers and reinsurers, Conning's software and advisory services have supported insurers' enterprise risk management needs for more than a decade.*

## GEMS® Economic Scenario Generator (ESG)

- » Monte Carlo simulation of future states of the global economy and financial markets using leading edge economic models
- » Produces realistic real-world tail events or can be calibrated for market-consistent risk-neutral purposes to fit complete volatility surfaces and multiple tenors/ratings
- » Provides returns and cash flows by asset class or even individual securities
- » Full market risk and asset coverage, including interest rates, spread, transition, default, concentration, inflation, equity, foreign exchange, and derivatives

*If your company would benefit from the financial risk modeling available through Conning's software platform, but the prohibitive cost of the IT infrastructure has been an obstacle, now is the time to call our representatives and discuss how Conning software with Grid-as-a-Service could work for you.*

## FIRM® Portfolio Analyzer

- » Powered by GEMS® ESG to model dynamic multi-portfolio trading strategies
- » Evaluates Strategic Asset Allocation within and across investment portfolios
- » Utilizes externally projected liabilities and cash flows for full enterprise perspectives
- » Applicable to property/casualty, life/pension, health, as well as multi-sector insurers and reinsurers

## ADVISE® Enterprise Risk Modeler

- » Powered by GEMS® ESG and includes all the functionality of FIRM® Portfolio Analyzer
- » Advanced stochastic simulation and analysis platform for stand-alone full enterprise risk modeling of property/casualty and health insurers and reinsurers
- » Comprehensive enterprise modeling platform can also integrate with existing life actuarial modeling systems and other risk management applications

## About Conning

Conning ([www.conning.com](http://www.conning.com)) is a leading global investment management firm with a long history of serving the insurance industry. Conning supports institutional investors, including pension plans, with investment solutions and asset management offerings, award-winning risk modeling software, and industry research. Founded in 1912, Conning has investment centers in Asia, Europe and North America. Conning's software and advisory services support insurance and pension risk modeling needs, providing insights for decision making, regulatory and rating agency compliance, strategic asset allocation and capital management. Conning's risk management software platform includes the award-winning\* GEMS® Economic Scenario Generator, FIRM® Portfolio Analyzer and ADVISE® Enterprise Risk Modeler.

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