GENESYS™

Decisions User Help

Genesys Decisions Simulation Modeling

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Simulation is an analytic tool used for accurately modeling the behavior of processes within a computer environment, and observing the performance of those processes as they operate. Simulation is typically used to model complex "queuing" problems that result from processes with variable arrival rates and handling times (such as bank teller lines or contact centers).

Simulation models are built using a detailed definition of a process, its inputs, business rules, and performance measures. While in use, the model simulates the process and catalogs the results. (In the contact center example, results are simulated by generating millions of inbound calls, and following them through the contact center network). The model then calculates output statistics on process performance.

Simulation is particularly beneficial when the value of accurate plans and forecasts is high and systems are complex, varied, have significant interdependencies, and have "second-order" effects leading to unpredictable interactions. A simulation model will save money and time by generating accurate forecasts, and enabling the testing of new strategies in the computer rather than in the real world.

Within Genesys Decisions lies a realistic simulation model of your contact center network, and your customer and agent behavior. Using this model, Genesys Decisions simulates the receipt and processing of millions of contacts (that is, inbound calls, chat sessions, etc. depending on the Models in your custom installation). It then tracks contact center activities and performance as these calls are routed through the center network, and either answered by agents or abandoned. This information is then summarized and displayed through the Scenario Main Grid, the Sensitivity Analysis, the Reports, and the Trend Analysis areas of the application.

Decisions Simulation Basics

Simulation inputs are:

- Staffing
- Average Handle Time
- Offered # of contacts
- Contact Arrival, Staffing Distribution, and AHT Variance

Simulation outputs are:

- Occupancy
- Service Metrics (that is, SL, ASA, Abandon rate)

Contact Arrival, Staff Distributions, and AHT Variance

Genesys Decisions uses contact arrival and staff deployment distributions that are maintained by the Genesys Decisions Administrator Application to allocate average weekly call volume and staffing levels to each interval of the week. The application also calculates the variance in AHT from the weekly average by interval, and uses this information to estimate the AHT for each interval during each scenario week.

For each contact type, the Genesys Decisions Administrator Application maintains:

- The distribution of call volume (that is, the percent of weekly call volume that arrives during each hourly interval during the workweek), and the standard deviation of that volume.

- The distribution of effective staffing (that is, the percentage of all hours agents were handling calls, in after call work, or available to take calls during each interval during the workweek), and the standard deviation of that staffing.

- The variance and standard deviation in AHT from the average during each interval of the week.