

# MERCURY CAPACITY PLANNING

## (POWERED BY HYPERFORMIX)

Mercury Capacity Planning™ (Powered By HyPerformix™) provides simulation modeling of real-world production environments to help you make better IT investment decisions that optimize your cost-to-risk ratio.

Using Mercury Capacity Planning, you can forecast and plan the types and quantities of key IT resources you need to meet critical business requirements. By performing “what-if” scenarios, you can better meet cost, performance, and utilization objectives involving Web, application, and database servers; system memory; network bandwidth; storage devices; server platform; and OS level.

Mercury Capacity Planning enables you to collect information, validate the data, build accurate models, and project “best-fit” production environments. Another key benefit is that you can perform capacity planning for business transactions on distributed systems.

Mercury Capacity Planning helps you determine the optimal IT resources needed to ensure that business applications meet performance and scalability requirements when they are rolled into production. It enables you to:

- Make strategic IT purchase decisions with better information.
- Improve predictability of application and infrastructure behavior in production environments.
- Increase the success of your IT consolidation and infrastructure change initiatives/projects.

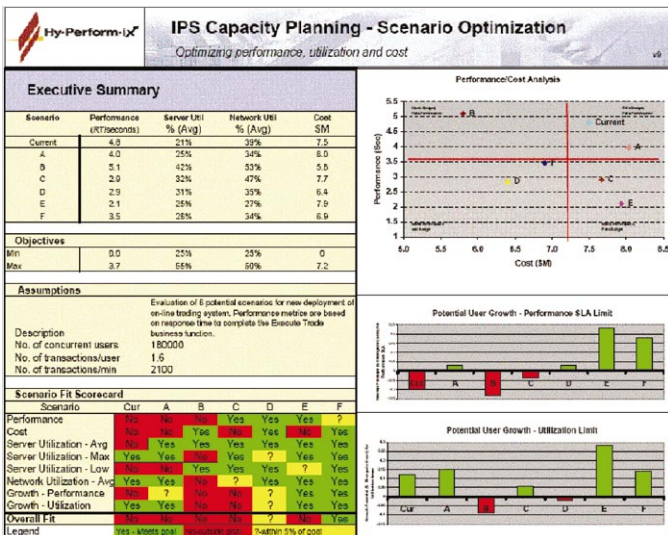
### How it Works

Through simulation modeling, Mercury Capacity Planning creates an exact replica of your production environment, helping you:

- Optimize the performance of production environments by proactively projecting the right mix of IT resources.
- Reduce the cost of IT operations by increasing the utilization of existing IT infrastructure.
- Streamline IT operations by allowing proper planning for consolidation projects.

Mercury Capacity Planning utilizes HyPerformix’s Integrated Performance Suite™ (IPS) discrete event simulation modeling technology. This technology enables IT organizations to build models of their existing or future production environments.

To build accurate models, Mercury Capacity Planning uses real-world data from Mercury LoadRunner®. This integration helps existing LoadRunner customers use LoadRunner data to calibrate models of their production environments.



A single intuitive interface shows the tradeoffs for cost, performance, and reliability for multiple deployment scenarios.

Once an accurate model of a production environment has been built, customers can perform an unlimited number of “what-if” scenarios to understand the impact of change of servers, OS levels, system memory, system CPU count, network devices, workflow, topology, and software.

| Performance - Response Time |      | 3.7 sec |      |      |      |      |      | Resource Utilization (Servers) |     | Max 66% Min 26% |     |     |     |     |     |
|-----------------------------|------|---------|------|------|------|------|------|--------------------------------|-----|-----------------|-----|-----|-----|-----|-----|
| Scenario                    | Cur  | A       | B    | C    | D    | E    | F    | Scenario                       | Cur | A               | B   | C   | D   | E   | F   |
| Avg. Resp. Time             | 4.4  | 4       | 5.1  | 2.9  | 2.9  | 2.1  | 3.5  | Avg Utilization                | 21% | 25%             | 42% | 32% | 31% | 25% | 26% |
| Min. Resp. Time             | 3.4  | 2.8     | 3.8  | 2.0  | 2.0  | 1.5  | 2.5  | Min Util                       | 12% | 31%             | 21% | 26% | 26% | 25% | 25% |
| Max. Resp. Time             | 5.76 | 4.9     | 6.12 | 3.5  | 3.4  | 2.4  | 4.2  | Max Util                       | 37% | 85%             | 54% | 49% | 43% | 25% | 29% |
| SLA Violation               | 1.1  | 0.3     | 1.4  | -0.8 | -0.8 | -1.4 | -0.2 | Overutilized                   | 6   | 3               | 3   | 0   | 6   | 0   | 0   |
| Meet SLA?                   | No   | No      | Yes  | Yes  | Yes  | Yes  | Yes  | Underutilized                  | 6   | 0               | 1   | 0   | 6   | 0   | 0   |
|                             |      |         |      |      |      |      |      | Meet Util Goals?               | No  | No              | No  | Yes | Yes | Yes | Yes |

| Infrastructure Cost |     | 7.2 \$M |     |     |     |     |     | Resource Utilization (Networks) |     | Max 50% Min 25% |     |     |     |     |     |
|---------------------|-----|---------|-----|-----|-----|-----|-----|---------------------------------|-----|-----------------|-----|-----|-----|-----|-----|
| Scenario            | Cur | A       | B   | C   | D   | E   | F   | Scenario                        | Cur | A               | B   | C   | D   | E   | F   |
| Servers             | 2.3 | 2.4     | 1.7 | 2.3 | 1.9 | 2.4 | 2.1 | Avg Utilization                 | 29% | 34%             | 53% | 47% | 35% | 27% | 34% |
| Network             | 1.9 | 2.0     | 1.5 | 1.9 | 1.6 | 2.0 | 1.7 | Min Util                        | 14% | 25%             | 43% | 31% | 28% | 41% | 25% |
| Pattern S/W         | 1.5 | 1.6     | 1.2 | 1.5 | 1.3 | 1.6 | 1.4 | Max Util                        | 78% | 63%             | 48% | 68% | 62% | 69% | 43% |
| App S/W             | 1.9 | 2.0     | 1.5 | 1.9 | 1.6 | 2.0 | 1.7 | Meet Util Goals?                | Yes | Yes             | No  | ?   | Yes | Yes | Yes |
| Total Cost          | 7.5 | 8.0     | 5.8 | 7.7 | 6.4 | 7.0 | 6.0 |                                 |     |                 |     |     |     |     |     |
| Meet Budget?        | No  | No      | Yes | No  | Yes | No  | Yes |                                 |     |                 |     |     |     |     |     |

Granularity decision grid shows infrastructure cost vs. performance of multiple scenarios.

### Integration with Mercury LoadRunner

We offer the only solution that guides and automates you through the capacity planning process, made possible via automated integration and model generation between Mercury LoadRunner and Mercury Capacity Planning. Benefits of this integration include:

- **Improved Modeling Precision:** Mercury Capacity Planning utilizes Mercury LoadRunner data, which helps improve precision in simulation model generation and analysis.
- **Rapid Delivery:** Automation of data gathering and model building shortens the length of capacity planning projects and reduces project costs.
- **A Complete Capacity Planning Solution:** Mercury Capacity Planning takes into consideration elements of information gathering, validation of gathered data, building of accurate models, and projection of best-fit environments.

### Make Strategic IT Purchase Decisions

Due to a lack of information to make an informed purchase decision, most IT organizations are forced to over-invest in infrastructure and other resources to ensure applications meet the needs of the business. Mercury Capacity Planning allows you to perform a cost/benefit comparison across various topologies and

hardware vendor configurations to determine the optimal choice for production. This ensures the right level of functionality and performance with the right level of investment.

### Predict Application/Infrastructure Behavior in Production

Mercury Capacity Planning bridges the gap between the lab (which is typically a subset of the production environment) and your actual production environment. Through simulation of real-world production environments, Mercury Capacity Planning helps predict and project application and system behavior prior to moving into production. It further determines the optimal configuration (topology and hardware vendors) for production and performs a cost/benefit analysis of alternative architectures.

### Execute IT Consolidation and Infrastructure Change Initiatives

Today, IT organizations implementing consolidation projects (e.g., data center, server, and/or application) don't have the ability to accurately project the optimal target configuration. Mercury Capacity Planning, for the first time, enables you to accurately project all of the resources required in a consolidation project. Mercury Capacity Planning helps ensure the success of your project; it shortens project length, and ensures that the consolidated infrastructure continues to meet business demands for quality and service.

## FEATURES AND BENEFITS

- Guides and automates the user through the capacity planning process, including automated integration and model generation between Mercury LoadRunner and Mercury Capacity Planning.
- Provides holistic end-to-end modeling of the resource consumption and performance characteristics of business functions across shared or dedicated infrastructure and applications.
- Allows simple drag-and-drop changes to the model to evaluate the impact of infrastructure changes without the need to replicate them in the physical world.
- Automates the execution of multiple infrastructure and application deployment scenarios and reports key performance and utilization metrics, so you can select the scenario that best meets business objectives.
- Includes a library of 1,600 pre-built models for infrastructure components, including servers, mainframes, and network devices – allowing you to quickly ask what-if scenarios about components you don't have in your test or production environment.
- Provides an intuitive user interface, allowing rapid comparison of “what-if” scenarios.



Mercury Interactive is the global leader in business technology optimization (BTO). We are committed to helping customers optimize the business value of IT. [www.MERCURY.COM](http://www.MERCURY.COM)