



HP NonStop Server Capacity Planning

HP Services

Technical data

Determining future hardware capacity requirements for your growing online transaction processing NonStop systems are critical in today's demanding business environment. Capacity planning specialists can estimate requirements for processor and disk volumes based upon your organization's business growth projections. This will enable you to plan, budget & project capital expenditure required to meet your future business objectives.

The HP NonStop Capacity Planning Service consists of activities that identify future capacity requirements, build a capacity model and produce a capacity plan. When the service is complete, you will be familiar with effective methods and techniques for projecting future hardware requirements.

Delivery of the HP NonStop Server Capacity Planning Service is a five-step process, as outlined below. Measure data and other information is gathered on your organization's application architecture and system configuration, and used to construct and calibrate a NonStop(Tandem) Capacity Planning Model (TCM). The model is used to predict the number of processors and logical disk volumes needed to support your organization's growth projections while maintaining the necessary response-time and service level requirements. Documentation is produced which details key service activities, including all forecast scenarios and model construction specifics.

Following are the details of the structured, five-step approach used for consistent delivery of the NonStop Capacity Planning Service:

- Planning and information gathering: defines issues, service level objectives, and data collection strategies
- Capacity model construction: defines transaction characteristics and specific modeling strategies
- Capacity model calibration: helps ensure the accuracy of the model and transaction definitions
- Capacity forecasting: produces a unique capacity plan specific to your organization and application
- Reporting: documents all key service activities and model construction specifics

Service benefits

- Provides a capacity plan based on actual application metrics and projected future business growth requirements
- Takes the guesswork out of capacity planning, which allows for budgeting based on facts
- Ensures you have sufficient system capacity to meet your service-level agreements with your users.
- Helps you avoid reactive situations and questionable capacity planning methods with a plan based on queuing theory modeling
- Provides 'what-if' analysis such as how the application will perform on different NonStop processor and disk types, including application transaction response-time constraints

Service feature highlights

- Planning and information gathering
- Customer orientation session
- Service deployment
- Project management

Service features**Table 1. Service features**

Feature	Delivery specifications
Planning and information gathering	<p>An HP service specialist will plan all the necessary activities and schedule the delivery of the service at a mutually agreed-upon time between HP or a qualified HP service provider and the Customer. All activities will take place during normal HP local business hours, excluding HP holidays.</p> <p>The service planning activities include:</p> <ul style="list-style-type: none">• Communication with the Customer, including fielding the Customer's queries regarding service delivery• Verification, using a pre-delivery checklist, that all service prerequisites have been met• Scheduling of the service delivery at a mutually agreed-upon time• Determination of peak processing period(s) for Measure data collection, and provision of scripts to begin measurements• Verification that the system where application is running is well tuned and balanced prior to measurements
Customer orientation session	<p>The HP service specialist will provide the Customer with an orientation session at the outset of the onsite delivery of this service. The orientation session is a formal kick-off meeting to familiarize the Customer with the TCM capacity planning methodology and is typically conducted with key members of the Customer's application development and operations staff. It is not intended as a classroom activity or formal training.</p> <p>Topics include:</p> <ul style="list-style-type: none">• HP presentation of service overview and capacity planning methodology• Customer presentation of the business application to be modeled and introduction of key staff members who are participating in service activities• Review of the proposed application transactions to be modeled• Review of the HP NonStop Capacity Planning Service tactical plan and schedule• Scheduling of interviews with key Customer personnel to gather pertinent information
Service deployment	<p>Service deployment activities will include:</p> <ul style="list-style-type: none">• Presentation of the service delivery agenda and schedule• Installation of software or hardware tools required• Review of application specifics, including documentation and prioritization of objectives• Establishment of capacity planning modeling strategy and business transactions to be modeled• Construction of the process categorization control file and creation of the workload apportionment model• Validation of transaction apportionment metrics and model calibration• Creation of the performance model from qualified measurement• Derivation of the resulting capacity planning model to produce a capacity forecast or forecasts based on the Customer's growth projections and response-time requirements

Service features

Table 1. Service features (continued)

Feature	Delivery specifications
Project management	The HP service specialist who is providing the service is also ordinarily responsible for providing project management. However, if requested, a dedicated project manager will participate in the project remotely.
	The project manager will: <ul style="list-style-type: none">• Manage the resources required to deliver the service• Review the Customer's responsibilities and other requirements necessary to facilitate service delivery• Facilitate the completion of a site survey to identify prerequisites that must be met prior to service delivery• Develop a project plan that defines the scope of the services to be delivered• Act as a liaison and a single point of contact between service delivery resources and the Customer's organization• Develop the project schedule and manage the project according to the defined timeline

Service eligibility

The Customer must:

- Be a current HP NonStop server Customer and have the application to be modeled actively running on a production NonStop platform
- Perform obligations pursuant to the Statement of Work (SOW)
- Provide the HP service specialist with the following information prior to the start of the service:
 - Overview of the system
 - Basic overview of the application
 - Description of the major transactions to be modeled
 - Description of the database
 - System statistics and measurements (HP provides a routine/script to gather this data)
- Obtain a license for and install Measure software. While the service does not include a license for TCM or MeasTCM software, HP will install these tools on the Customer's system for use only during the delivery of this service. They will be removed at the conclusion of the service. Customers wishing to be able to maintain and manipulate the TCM model of their application will need to obtain a license for both TCM and MeasTCM software.
- HP strongly recommends the customer undertakes formal training in the use of TCM, via a 'Modeling With TCM' transfer of information (TOI) this can be delivered prior to or during the service deployment. The customer is recommended to familiarize themselves with TCM-based modeling via a thorough review of the TCM manual prior to the service. This helps ensure HP can complete the service on time and the Customer obtains the most benefit from the service.

Service limitations

The following activities are not included in this service, but can be provided through related services or at additional cost:

- A license for TCM, MeasTCM or Measure software
- A performance evaluation or system-tuning activities; it is assumed the system is well tuned. HP will be happy to quote for a NonStop Performance and Tuning service to ensure the customer is receiving the maximum benefit from the installed system for the capital invested
- Configuration of any optional software products not specifically required by the service specialist to complete delivery of the service
- Any services not clearly specified in this document or the associated Statement of Work

The following limitations apply specifically to TCM functionality:

- TCM computes only CPU and disk components of response time. It does not compute end-to-end response time, which includes communications line time.
- TCM does not model memory, disk controllers, or disk space; TCM assumes that none of these constitutes a bottleneck.

Customer responsibilities

The Customer will:

- Contact an HP service specialist to schedule the delivery of the service within 90 days of date of its purchase
- Assign a designated person from the Customer's staff who, on behalf of the Customer, will grant all necessary approvals, provide requested information in a timely manner, be available to assist in facilitating the delivery of this service, manage internal issues related to the Customer environment, and provide sign-off to verify that the service has been delivered
- Provide IT administration (application development and system operations) resources to gather necessary information regarding the Customer's application architecture and operational or business objectives, plus any other special requirements, as well as perform any configuration activities needed to facilitate delivery of the service
- Arrange for and provide a vendor or third-party resource capable of describing specific application architectural details, if not otherwise available within the Customer's staff
- Ensure the availability, at all times during service delivery, of one or more individuals who will provide administrator-level access to the systems where the work is to be performed
- Ensure that all service prerequisites as identified in the 'Service eligibility' section are met
- Allow HP full and unrestricted access to all locations where the service is to be performed
- Provide a suitable work area for delivery of the service, including access to an outside telephone line, power, and any network connections required

General provisions/Other exclusions

- HP reserves the right to charge, on a time and materials basis, for any additional work over and above the service package pricing that may result from work required to address service prerequisites or other requirements that are not met by the Customer.
- Portions of the service are delivered remotely or onsite, at HP's discretion.
- HP reserves the right to re-price this service if the Customer does not schedule and provide for subsequent delivery within 90 days of purchase.
- HP's ability to deliver this service is dependent upon the Customer's full and timely cooperation with HP, as well as the accuracy and completeness of any information and data the Customer provides to HP.
- The service is available only during local HP business hours, unless otherwise agreed to by HP or the qualified HP service provider. Any service delivery outside these hours may be subject to additional charges.
- Service delivery may require usage of HP-owned or third-party tools (hardware or software) licensed for use by HP. Such tools are used for the duration of the service event and will be removed upon completion of delivery. These tools are exclusively for the use of HP service specialists in the execution of this service delivery, and the Customer may not independently use these tools in any way. The following conditions also apply:
 - No right, title, or interest in, or any license under any copyright, patent, trade secret, trademark, mask work protection right, or any other intellectual property right is either granted to the Customer or implied by the use of any HP-owned or third-party tools at Customer's facility, and no right is granted to the Customer to make any copies of the HP-owned or third-party tools in any form.
 - The Customer will not reverse assemble, reverse compile, or otherwise obtain or attempt to obtain the source code of the HP-owned or third-party tools, in whole or in part.
 - The Customer acknowledges that, upon completion or termination of HP NonStop Capacity Planning Service, HP will remove all copies of the HP-owned or third-party tools from the Customer's system and site.

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