



Software Product Description

PRODUCT NAME: Enterprise Capacity and Performance Planner
Version 5.2

SPD 36.04.13

DESCRIPTION

Enterprise Capacity and Performance Planner

The Enterprise Capacity and Performance (ECP) Planner modeling component is used to predict the performance of standalone and clustered OpenVMS VAX, OpenVMS Alpha, and Compaq® Tru64™ UNIX® systems. The ECP Planner modeling component determines system performance levels for various workloads and configurations. The modeling component also handles data collected on these platforms. Performance predictions are based on an analytic queuing network model.

The modeling component includes a graphical modeling interface from which “what-if” analyses can be performed. A baseline model is created from information collected by the ECP Data Collectors. This baseline model becomes the starting point for assessing the impact of changes to the configuration or the workloads. Users can add, delete, or change any hardware component or workload, and examine the impact on performance by viewing various performance metrics, such as: utilization, response times, throughput, queue length, and service time. Models can be saved for further evaluation. The “what-if” analyses form the foundation of capacity plans.

The ECP Planner allows the user to define the system’s total workload in terms of manageable units. Workloads are expressed as classes that include groups of processes (for both OpenVMS and UNIX with similar characteristics). These classes are used in model generation. Workload classes can be defined according to users, UICs, process name, account name, and process mode. Subclasses are a set of transactions under a class. These may be images if the images function as transactions. Workloads are thus able to be expressed as a class/subclass table for transaction performance statistics. UNIX subclasses are not supported since a process runs one and only one image (command).

The ECP Planner provides performance information for each CPU, HSC, disk, channel, adapter, bridge, router, switch, and interconnect at both current and projected workloads or configurations. This includes support for volume shadowing, disk striping, and RAID levels 0, 1, 0+1, 3, 5, and 6

The ECP Planner supports the following network protocols:

- SCS
- NSP/DECnet
- OSI/DECnet
- TCP/IP
- UDP/IP
- LAT
- IPX/SPX

The network subsystem, as it pertains to system based capacity planning, is the set of network components and protocols for which communications of workload traverses selected network path(s) over all capacity planning end-node pairs. The modeling focus of the network subsystem is to support end-to-end response time modeling, network device performance, and client/server capacity planning (extended LAN support, and WAN).

Client/server support is provided in that software servers may be defined to serve one or more clients. Multiple levels of software servers are allowed. ECP Planner will support capacity planning for environments that include applications whose client/server components are implemented on multiple CPUs. The performance statistics are provided in either summary or detailed table reports, as well as graph reports, and include:

- Resource utilization
- Response time
- Throughput
- Queue length
- Service time

In addition to their reporting functions, graph reports allow you to perform modeling activities such as user load balancing in a dynamic, visual manner.

ECP Planner provides prediction reporting that indicates the workload size at which a component will saturate. The report shows the system performance at incremental increases of workload up to the saturation point. The increment steps are 25 percent of initial component utilization. After an increase to 100 percent, only the saturation point is shown.

The saturation analysis identifies bottlenecks before they occur, allowing the system manager to be proactive in eliminating bottlenecks and providing a consistent level of system performance to users.

Features

To plan effectively for future computer resource needs:

An enhanced graphical modeling interface which provides an easy-to-use interface for performing multiple “what-if” analyses.

More graphing and reporting options for all collected data. These options allow different metrics to be displayed as either time-series graphs or pie charts.

Work performed by OpenVMS and UNIX systems can be grouped into meaningful categories.

The Modeler/Characterizer provides the following functions:

Performance modeling is supported for standalone systems with the above operating systems and clustered systems.

“What-if” analysis provides performance characteristics of the system before actual changes are implemented.

- Built-in configuration rules assist in modeling and validating supported configurations.
- Saturation analysis identifies the workload at which system components will saturate and performance bottlenecks will occur.
- CPU priority modeling is supported.
- Extended LAN protocols and components are supported.
- WAN protocols and components are supported.
- Client/server application environments are supported.

- Modeling for clients (PCs) that talk to an OpenVMS system using PATHWORKS is supported.
- Context-sensitive Help is available.
- All hardware that runs OpenVMS or Compaq Tru64 UNIX can be modeled.

Required Components

The ECP Reducer is required to pre-process the data files (.CPC) from the ECP Data Collector (or other supported collector) into the format (.MERG) required as input to the ECP Planner before use.

The ECP Reducer and ECP Planner do not have to be installed on the same system, nor on the system that the Data Collector is monitoring. The data files can be copied manually from one system to another, or be available on a cluster-wide mounted disk.

Year 2000 Ready

This product is capable of accurately processing, providing, and/or receiving data from, into and between the twentieth and the twenty-first centuries, and the years 1999 and 2000, including leap year calculations. This product must be used in accordance with the associated product documentation and all hardware, firmware, and software used in combination with this product must properly exchange accurate date data with the product.

HARDWARE REQUIREMENTS

Machine	Any configuration that can run OpenVMS Alpha V6.2 to 7.2-1, OpenVMS VAX V5.5-2 through V7.2 or Compaq Tru64 UNIX V4.0 to V4.0F.
Disk Space	<p>OpenVMS Alpha (Block Cluster Size = 1):</p> <p>Disk space required for installation: 96,000 blocks</p> <p>Disk space required for use: 9,000 blocks</p> <p>OpenVMS VAX (Block Cluster Size = 1):</p> <p>Disk space required for installation: 25,000 blocks</p> <p>Disk space required for use: 25,000 blocks</p> <p>Compaq Tru64 UNIX:</p> <p>Disk space required for installation: 15 MB</p> <p>Disk space required for use: 15 MB</p>

Additional disk space is required for the data files (.CPC) to be analyzed and intermediate working files (.MERG).

SOFTWARE REQUIREMENTS

System	OpenVMS Alpha 6.2, 7.1, 7.2, and 7.2-1 OpenVMS VAX 5.5-2, 6.2, 7.1 and 7.2 Compaq Tru64 UNIX 4.0 to 4.0F
Software	ECP Data Collector V5.2 for each remotely monitored operating system platform (SPD 70.10.03) ECP Reducer V5.2 - Converts selected data gathered by the ECP Data Collector into a form used by ECP Planner's workload classification and modeling components (SPD 70.04.04) DECWindows Motif V1.2-3 or later

DECwindows Motif® V1.2-3 or later is required for graphical user interface system use. A color monitor with 256 color cells is required to display the product.

OPTIONAL SOFTWARE

SPD

70.05.04	ECP Analyzer V5.2 – Provides MOTIF-based performance and workload analysis for data collected by the ECP Collector and other collectors.
70.74.02	PAWZ Agent V2.0 – Controls the ECP Collector and provides performance data from the Collector to the PAWZ Server on a nightly basis.
70.73.02	PAWZ Server V2.0 - Stores the data collections in an SQL Server database located on a Windows NT 4.0 Server machine for display as graphs using a web browser.

GROWTH CONSIDERATIONS

The minimum hardware/software requirements for any future version of this product may be different from the requirements for the current version.

DISTRIBUTION MEDIA

- CD-ROM
- TK50 Streaming Tape (OpenVMS VAX option Only)

ORDERING INFORMATION

Software Licenses:

Part Number	Description
QL-GX3A9-RA	OpenVMS VAX
QL-23MA9-RA	OpenVMS Alpha
QL-23QA9-RA	Compaq Tru64 UNIX

Software Media

Part Number	Description
QA-GX3AA-H5	OpenVMS VAX
QA-23MAA-H8	OpenVMS Alpha
QA-23QAA-H8	Compaq Tru64 UNIX

Software Documentation:

Part Number	Description
QA-GX3AA-GZ	OpenVMS VAX
QA-23MAA-GZ	OpenVMS Alpha
QA-23QAA-GZ	Compaq Tru64 UNIX

Software Product Services:

Part Number	Description
QT-GX3A*-**	OpenVMS VAX
QT-23MA*-**	OpenVMS Alpha
QT-23Q3A*-**	Compaq Tru64 UNIX

* For additional information on available licenses, services, and media, refer to the appropriate price book. The above information is valid at time of release. Please contact your local Compaq office for the most up-to-date information.

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License Management Facility Support

This layered product supports the License Management Facilities for OpenVMS and Compaq Tru64 UNIX. License units for this product are allocated on an Unlimited System Use basis.

For more information on the License Management Facility, refer to the OpenVMS Operating System Software Product Description (SPD 25.01.xx and for Alpha SPD 41.87.xx) or the OpenVMS Operating System documentation. For Compaq Tru64 UNIX, refer to SPD 41.61.xx.

ECP and PAWZ INFORMATION

For more information

- Send mail to capacity@compaq.com

For more information about Digital's licensing terms and policies, contact your local DIGITAL office.

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