

SIZING GUIDE



Sizing for Taxpayer Online Services from SAP, Version 2.0

Released for SAP Customers and Partners

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Documentation in the SAP Service Marketplace

You can find this documentation at the following address:
<http://service.sap.com/sizing>

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1 Introduction

Tax authorities promote taxpayer self-services in order to reform business processes, reduce costs and improve taxpayer services. The application is exposed to the Internet as an external facing application. The registered taxpayers are able to file tax declarations, make payments and request credits in the application. The taxpayer can access to the web pages of tax authorities using his own hardware or the office PC or a public PC.

1.1 Functions of Taxpayer Online Services (TPOS) from SAP

The composite application for Tax Online Services from SAP offers the following features:

- Taxpayer Selection for tax advisers
- Task Overview
- File a new return
- File a supplement return
- Save a draft of a return
- Display filing history
- Pay taxes on account
- Pay debits
- Request a credit
- Display account balance
- Maintain or display taxpayer details
- Maintain or display taxpayer relationships
- Display assigned tax types and assigned tax objects

1.2 Architecture of TPOS

TPOS consists of two main components:

- **Application Service for Taxpayer Online Services from SAP 2.0**

The Front-end application runs on NetWeaver Composition Environment 7.11 SP04 application server. This component of the application provides the user interface to the end users and establishes the connectivity to SOA platform of ERP 6.0 EHP5.

- **ERP Backend System for Taxpayer Online Services from SAP 2.0**

The TPOS backend application is the ERP 6.0 EHP5 system.

The graph below gives an overview about the architecture of Taxpayer Online Services from SAP.

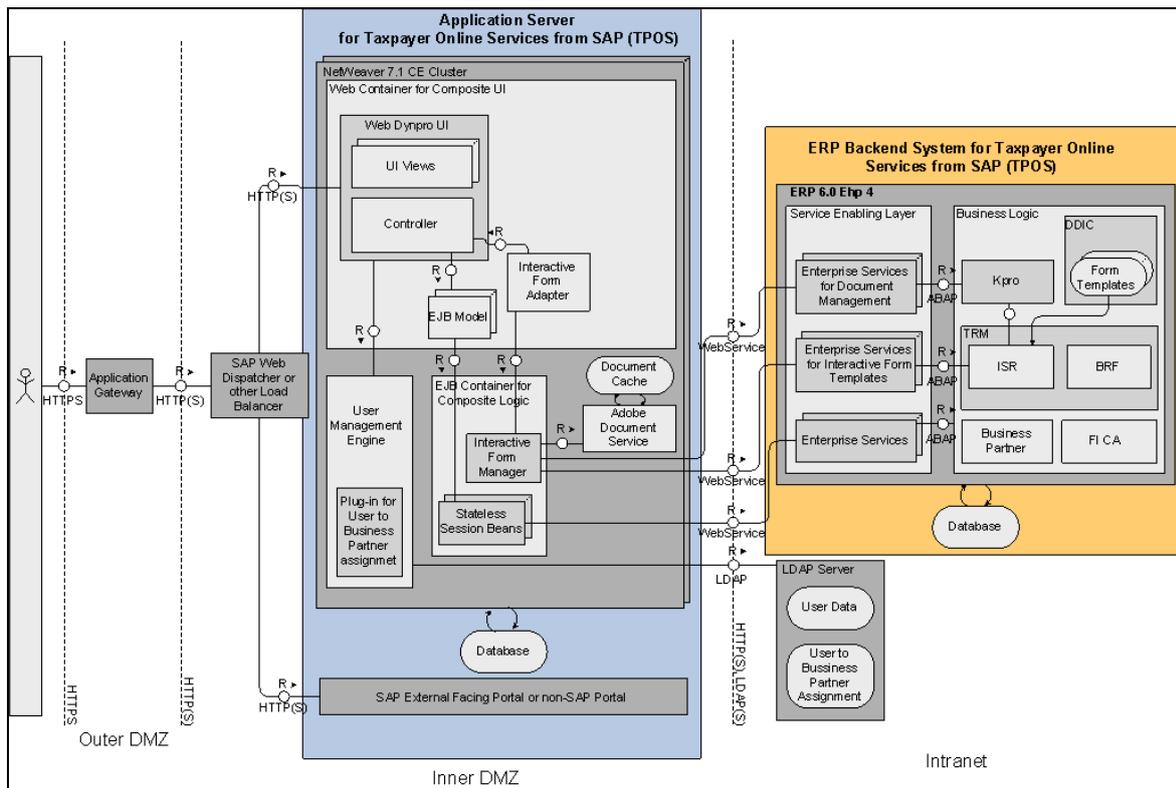


Figure 1: Architecture of Taxpayer Online Services from SAP

1.3 Factors that influence the performance

The following list gives an overview of the factors that may influence the performance.

- **Amount of (concurrent) online users**
- **Availability requirements**
- **PDF Documents size**

Tax return forms sizes should be kept as low as possible. TPOS has ~10kBytes data transfer on average to the end users browser. Utilizing large PDF documents for tax declaration can result in higher response times.

- The end user can experience slow response times when opening the tax declaration for the first time.
- A large PDF can result in a high CPU utilization on the end users Adobe Reader. The size of your PDF should be kept under 100 kBytes.
- Please avoid using images in Tax declarations.

- **Branding images on external user interface**

The usage of branding images on the user interface can result in higher network data transfer. Branding images must be cacheable on client side.

- **Browser Cache usage**

Cache of Internet browser should be switched on.

- **J2EE Framework space and cache space on 64 bit box**

- Each server node allocates 443 MB framework space after warm-up.
- The allocation of cache takes 59 MB.
- The session footprint of a named logged in user takes 3.3 MB.
- Please consider these parameters while setting up the memory sizing for your application.

2 Sizing Fundamentals and Terminology

SAP provides general sizing information on the SAP Service Marketplace. For the purpose of this guide, we assume that you are familiar with sizing fundamentals. You can find more information at <http://service.sap.com/sizing> → Sizing → General Sizing Procedures.

This section explains the most important sizing terms, as these terms are used extensively in this document.

Sizing

Sizing means determining the hardware requirements of an SAP application, such as the network bandwidth, physical memory, CPU processing power, and I/O capacity. The size of the hardware and database is influenced by both business aspects and technological aspects. This means that the number of users using the various application components and the data load they put on the server must be taken into account.

Benchmarking

Sizing information can be determined using **SAP Standard Application Benchmarks** and scalability tests (www.sap.com/benchmark). Released for technology partners, benchmarks provide basic sizing recommendations to customers by placing a substantial load upon a system during the testing of new hardware, system software components, and relational database management systems (RDBMS). All performance data relevant to the system, user, and business applications are monitored during a benchmark run and can be used to compare platforms.

SAPS

The SAP Application Performance Standard (SAPS) is a hardware-independent unit that describes the performance of a system configuration in the SAP environment. It is derived from the Sales and Distribution (SD) Benchmark, where 100 SAPS is defined as the computing power to handle 2,000 fully business processed order line items per hour. (For more information about SAPS, see <http://www.sap.com/benchmark> ➤ SAPS).

Initial Sizing

Initial sizing refers to the sizing approach that provides statements about platform-independent requirements of the hardware resources necessary for representative, standard delivery SAP applications. The initial sizing guidelines assume optimal system parameter settings, standard business scenarios, and so on.

Expert Sizing

This term refers to a sizing exercise where customer-specific data is being analyzed and used to put more detail on the sizing result. The main objective is to determine the resource consumption of customized content and applications (not SAP standard delivery) by comprehensive measurements. For more information, see <http://service.sap.com/sizing> → Sizing Guidelines → General Sizing Procedures → Expert Sizing.

Configuration and System Landscaping

Hardware resource and optimal system configuration greatly depend on the requirements of the customer-specific project. This includes the implementation of distribution, security, and high availability solutions by different approaches using various third-party tools. In the case of high availability through redundant resources, for example, the final resource requirements must be adjusted accordingly.

There are some "best practices" which may be valid for a specific combination of operating system and database. To provide guidance, SAP created the NetWeaver configuration guides (<http://service.sap.com/instguides> → SAP NetWeaver).

Hardware Minimum Requirements

Unless otherwise indicated, the sizing guidelines specify the net requirements of the business application. The minimum requirements for installing an "empty" system are specified in the respective implementation guides (<http://service.sap.com/instguides>, in the section for hardware and software requirements). The same applies for front-end PC minimum and optimal requirements.

3 Initial Sizing for TPOS

The sizing guideline given below is based on a reference scenario, so it should be used as a general guideline, not as a strict recommendation. When creating the initial sizing of TPOS we set up a typical scenario that will be used in 80% of the use cases of TPOS. The reference scenario is the following:

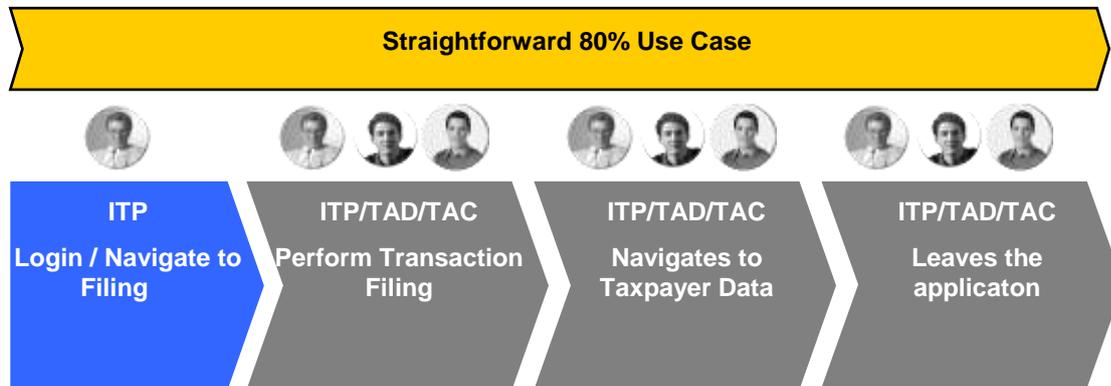


Figure 2: TPOS Reference Scenario

ITP – Individual Taxpayer (Person or Company)

TAD – Tax Advisor (External Tax Specialist)

TAC – Tax Accountant (Employee of a Business Taxpayer with type Company)

The first step of the scenario is only applicable to the TAD. After logging in to the application he selects one of his clients whom he wants to perform tax related activities on behalf of. The selection leads him to the task overview screen where he chooses a filing task from the table. This task represents one filing obligation of his client.

The second step is accessible to all kinds of users including the ITPs who can choose tasks immediately after logging in instead of being able to select a client. The activity of filing means to fill a tax return form (Adobe) and send it to the tax authority. After the form is submitted a confirmation screen with all important sent data is displayed.

The payment activity comes after the filing process which means the user can pay the amount of the taxes collected from his tax return in advance. When pressing the pay button on the filing confirmation screen he gets to the payment on account page prefilled with all the necessary data. The payment method can be changed according to the available bank accounts/credit cards. The details of a successful payment can be observed on the confirmation screen.

The fourth step is the maintenance of own personal data in case of ITP and the client's data in case of TAD/TAC. The user opens the taxpayer data details screen via the taxpayer data tab. He chooses the additional addresses by pressing on the appropriate button which triggers a pop up. On this new window the details of defined addresses can be managed e.g. by modifying the region. After pressing the edit button, selecting another region value from the DDL pressing the apply button and closing the window the user must save the changes by clicking on the save button. Success message on the taxpayer data index screen indicates a successful saving of data.

3.1 Assumptions

- For the sizing guideline we considered the CPU consumption (CPU time) and the memory consumption on the server needed to handle the user load.
- TPOS business can only be applied with the usage of the Tax and Revenue Management (PSCD-TRM) of ERP solution, please consider the hardware sizing guideline for the ERP 6.0 EHP5 system as an additional resource consumption to your existing ERP backend usage.
- For ERP 6.0 EHP5 disk sizing please refer to the Sizing guideline of PSCD_TRM solution.

3.2 Sizing guideline

We defined four system categories, based on the number of typical business cases expected to be handled by the composite application, running on a productive system of SAP NetWeaver

Composition Environment 7.11. The table below contains the CPU size and the Java Heap Size (Memory) required to handle the load of the concurrent users for each system category. Please use the following table as a rule of thumb, when setting up your hardware for TPOS.

T-Shirt Model for TPOS (CPU and Memory)

Category	Number of Submitted Tax Declarations / Hour	Net Minimum Hardware Requirements for Taxpayer Online Services from SAP	
		NetWeaver Composition Environment 7.11 SP04 (CPU & Memory)	ERP 6.0 EHP5 (CPU & Memory)
Small	0 – 200	400 SAPS, 1 GB ¹	410 SAPS, 600 MB
Medium	200 – 2000	4000 SAPS, 4 GB	4100 SAPS, 3 GB
Large	2000 – 20000	40,000 SAPS, 25 GB	41,000 SAPS, 20 GB
Extra Large	20000+	Please contact SAP or your hardware vendor	

4 Comments and Feedback

Both are very welcome; please send them to Attila Séllyei, Suite Composite Development at attila.sellyei@sap.com.

¹ Java Memory requirements depend on the number of service nodes in the system landscape. Each Java server node allocates additionally:

- Framework space: 443 Mb
- Cache size: 59 Mb

Each logged on users takes 3.3 MB as session space on NetWeaver CE 7.11 SP04