

Client Copy and Transport



HELP.BCCTSCCO

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Client Copy and Transport

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Client Copy

Client Copy

Use

The *Client Copy* tool allows you to copy selected components of an existing client to another client. The target client can either be in the same R/3 system or in another R/3 system.

Resource Requirements

Copying clients requires a large amount of system resources. To avoid premature termination due to bottlenecks, you should ensure that enough resources are available by considering the following points:

- **Database storage space**

Perform a test run before copying a client. This test run determines which tables are to be changed.

For ORACLE, INFORMIX, ADABAS and DB2/6000 databases, you can check the test run log to see whether there is sufficient database space available.



Note that only an estimate of storage requirements is possible, because space already allocated, but not yet used, is not taken into account. A client without application data needs approximately 150-200 MB of storage space in the database.



For pooled tables, the estimate is very imprecise, because their extent size is very large. Therefore, you have to assume that a new extent is required for each pooled table, which must be added to the estimate.

- **Runtime**

Copying a client can take several hours, and even users working in clients other than the source or target client can make the time longer. For example, locks resulting from work being done in a third client in the same system can also obstruct the processing of individual objects. From a technical point of view, you can work in the system while client copy is running. However, you are strongly advised not to do this or do it in exceptional cases only.

Implementation Considerations

You can use client copy to set up the following clients:

- New clients based on SAP's reference client 000 when the R/3 System is first implemented
- Training clients
- Demonstration clients
- Test clients
- Production clients



When you create your first client by copying it, we strongly recommend that you use profile SAP_CUST.



You are no longer required to transport clients before you can copy clients between systems. Instead, you can make a remote copy. Nevertheless, SAP will provide continued support for the transport function.



Starting with Release 4.6A, client copy is much quicker due to parallel processing. The parallel processes are dynamically generated at runtime. The factor that influences copy speed is now the underlying database.

Features

When copying clients, you can select what you want to transfer from the source client to the target client:

- **User masters:** You select this option, for example, if you want to give all users of an existing client the same authorizations in the target client.
- **Client-specific Customizing:** You select this option, for example, if you want to set up a new client in an existing system.
- **Client-specific Customizing and master/transaction data:** You select this option, for example, if you want to set up a test client that is identical to the production client (in the same system).
- **Client-specific and cross-client Customizing:** You select this option, for example, if you want to set up a quality assurance system based on the production client of another system.
- **Client-specific and cross-client Customizing and master/transaction data:** You select this option, for example, if you want to set up a test client based on the production client of another system.



The last two options are only applicable, if you copy clients between different systems.

When the copy process is completed, the client copy tool automatically generates all ABAP Dictionary objects that were created as a result of a generation process.

Normally, all client-specific data that has not been copied is deleted in the target client.

Restrictions

Background Processing

You can copy clients either online or in the background, but SAP recommends that you schedule client copies as background jobs for the following reasons:

Client Copy

- During client copy, you must ensure that no user logs on to the system. For technical reasons, this cannot be ensured by means of automatic locks.



Since users already working in the target client cannot be locked automatically before client copy starts, you must ensure that they leave the system.

- During client copies, users should also stop working in the source client. In some cases, however, this is not possible, particularly, if the source client is the production client. To avoid inconsistencies that may occur if users work while the copy process is running, related tables are copied together.
- Since large volumes of data are involved in the copy process, copying or transporting a client can take several hours. During this time, one or more dialog processes are in use.



The client copy tool generally uses one or more dialog processes even if you have started it in the background.



Since client copy now works with parallel processes that are started by the system as dialog processes, you must increase the default timeout value for these processes. To do this, you set profile parameter MAX_WPRUN_TIME. You are recommended to set a value of 30 minutes. On account of the R/3 structure, it is not always possible to set the desired number of processes.

- In distributed systems, the background process often runs on a database server. This reduces the network load.

Cross-Client Data Involved in Cross-System Copies and in Transports

When cross-client tables are transported, inconsistencies may occur in the target system:

Scenario 1: You have just installed the target system. The first step in setting up the clients involves importing a client from another system. Since there are no other clients in the system yet, you can also copy the cross-client tables to ensure that all Customizing settings remain consistent, including those pointing to cross-client objects.

Scenario 2: In the target system, you have set up clients whose data must not be affected. **The cross-client data must not be imported into the system from outside**, since the cross-client data overwrites existing data, so that the Customizing data of the other clients in the target system is no longer consistent. Only the data in the new client is consistent. This is why you should not transport the cross-client data. The data in the other clients of the target system is then still usable, and only the new client needs some postprocessing to reconcile the client-specific Customizing data copied with the cross-client Customizing data of the target system.

Technical Background

Number Ranges

When copying a client, you have to take number ranges into account. The handling of number ranges depends on how the data is processed:

Processing of data	Handling of number ranges
Both Customizing data and application data are copied.	Number ranges are copied with the data, because they are needed by the application data.
Only Customizing data is copied.	Number ranges are reset, because the application data that refers to them is deleted and then rebuilt.
Only Customizing data is copied, application data in the target system is not deleted.	Number ranges of the source system and the application data of the target system are merged. We recommend that you do not use this option.

Table Selection and Table Classes

Depending on the copy option you have selected, the client copy tool determines the purpose of the table in the system when the table is copied. For example, if you selected the *Customizing* option, and the table belongs to Customizing, then the table is copied to the target client. If the table contains application data, however, the table contents are not copied, but deleted based on the *Initialize & Recreate* option.

To determine the purpose of a table, the client copy tool uses the delivery class assigned. The client copy tool assumes that all tables belong to Customizing except those that have classes L, A, and W:

- L** These tables should be empty in the new system.
- A** Application tables
- W** System tables that are filled internally; their contents are purely technical. W tables are **not** taken into account by the client copy tool.

Identity of Table Structures



The following is only true for cross-system client copies.

So that you can set up a new client with the help of the client copy tool, the structures of all tables to be copied must be identical in both the source and the target system.

- **Client copy:** Before the client copy process is started, the client copy tool automatically performs a consistency check. If inconsistencies are detected, the copy process is not started and an error message is displayed.
- **Client transport:** If an RFC connection can be established between the systems, you can use the report RSCLCHK to determine whether the structures are the same. If they are not, transport errors and inconsistencies may occur.

Technical Background

Copy Profiles

For copying clients, R/3 offers copy profiles that make it easier for you to select and combine the components you want to copy. SAP delivers the following copy profiles:

SAP Copy Profiles

Copy profile	Description
SAP_USR	Copies user master records and profiles only.
SAP_CUST	Copies all Customizing tables, including user profiles.
SAP_UCUS	Copies all Customizing tables, including user data and user profiles.
SAP_ALL	Copies all data belonging to a client.

Authorizations

Authorizations

To be able to copy and transport clients, you need the appropriate authorizations. There are two types of authorizations: general authorizations for client copy, and special authorizations that depend on what you want to copy.

General authorizations for Client Copy

Authorization	Allows you to
S_TABU_CLI	Maintain cross-client tables.
S_TABU_DIS	Maintain system tables.
S_CLIENT_IMP	Import data when performing a client copy.
S_DATASET	Access the file system.

The following authorizations are required to copy:

- User masters
- Client-specific Customizing and master/transaction data
- Client-specific and cross-client Customizing and master/transaction data

Copying User Profiles and User Master Records

Authorization	Allows you to
S_USER_PRO	Copy user profiles.
S_USER_GRP	Copy user master records.

The following authorizations are additionally required for client transports:

Transporting Clients

Authorization	Allows you to
S_CTMS_ADMI with <ul style="list-style-type: none"> • TTYPE 'CLCP' • ACTVT '01' 	Create object lists for client transport and copy object lists between two clients.



The user **SAP*** has all the required authorizations.

Maintaining Clients and Logical Systems

Procedure

Choose *Administration* → *System administration* → *Administration* → *Client admin.* → *Client maintenance* from the SAP main menu.

For more information on maintaining clients, refer to the Customizing documentation.



If you have maintained a logical system in each of the source and target clients and assigned it to the client, the logical system names in the target client application data are automatically converted after copying the application data (with copy profile SAP_ALL).

See under *Basis* → *Application Link Enabling (ALE)* → *Prepare sender and receiver systems* → *Create logical systems* in the implementation guide.

Copying Clients Within the Same System

Copying Clients Within the Same System

Procedure

1. Choose *Tools* → *Administration* → *Administration* → *Client admin.* → *Client copy* → *Local copy*.
2. Select a copy profile that matches your requirements.
If you want to use the selected profile as a default setting, choose *Profile* → *Save profile value*.
3. Enter the source client.
4. Start the copy process.
Normally, you should start this procedure as a background job. However, if you only want to copy user data and profiles, you can run it online.

See also:

[Copy Profiles \[Page 11\]](#)

Copying Clients Between Systems

Procedure



When you copy a client from one system to another, the data is transferred directly via the RFC interface - there is no intermediate storage on hard disk:

1. Choose *Tools* → *Administration* → *Administration* → *Client admin.* → *Client copy* → *Remote copy*.
2. Select a copy profile that matches your requirements.
3. Enter the RFC destination.
4. Start the copy process.

Normally, you should start this procedure as a background job. However, if you only want to copy user data and profiles, you can run it online.

See also:

[Copy Profiles \[Page 11\]](#)

Transporting Clients Between Systems

Transporting Clients Between Systems



You are no longer required to transport clients before you can copy clients between systems. Instead, you can make a remote copy. Nevertheless, SAP will provide continued support for the transport function.



During client transports, all languages of the source system are transported. They overwrite the texts in the target system. Therefore, all texts are lost in the target system whose language exists only in the target system but not in the source system.

Procedure

1. Choose *Tools* → *Administration* → *Administration* → *Client admin.* → *Client transport* → *Client export*.
2. Select a copy profile that matches your requirements

Up to three transports are performed:

Transport	Description
<sid>KO<no>	Cross-client data.
<sid>KR<no>	Client-specific data.
<sid>KX<no>	Texts and forms.

The data export is performed automatically. The output of the export includes the name of the transport requests that are to be imported.

To adapt the runtime environment to the current state of the data, you may need to perform postprocessing activities.

Postprocessing After Client Import

Choose *Tools* → *Administration* → *Administration* → *Client admin.* → *Client transport* → *Post-process import*.

See also:

[Copy Profiles \[Page 11\]](#)

Copying Transport Requests Within the Same System

Copying Transport Requests Within the Same System

You can use this function to transport Customizing changes to the target client that have been made in the source client after the client copy.

Procedure

Choose *Tools* → *Administration* → *Administration* → *Client admin.* → *Special functions* → *Copy transport request.*

Deleting Clients

Deleting Clients

Procedure

1. Log on to the client to be deleted.
2. Choose *Tools* → *Administration* → *Administration* → *Client admin.* → *Special functions* → *Delete client*.

You can also specify whether you want to delete the client from client administration.

Displaying Copy Logs

Procedure

1. Choose *Tools* → *Administration* → *Administration* → *Client admin.* → *Copy logs*.

The system displays a list of all client copies, where the logon client was identical to the target client.

3. To display the detailed log for a run, position your cursor on the appropriate run, and choose *Choose*.

The system displays a list that contains the following information:

- Copy type
 - Profile
 - Status
 - User
 - Tables where copy problems occurred
 - Statistical info
4. To view further details for the run, choose *Details*.

The system displays a selection list. From this list, you can retrieve information on the number of tables copied or the number of exit programs, for example.

5. If copy problems occurred for a table during a local client copy, you can choose *Copy errors* to copy these tables again.

Restarting Client Copy

Restarting Client Copy

If a client copy terminates for technical reasons, for example, due to a database shutdown, you can always restart the process from the point of termination:

- If you start a client copy or a client transport, and the previous process terminated prematurely, the system automatically proposes restart mode with the same parameter settings used for the copy that caused the termination.
- If the restarted process fails, the log displays a special note indicating possible reasons for the error. Before you try to restart the program once again, eliminate the error.

Error Handling

Client copies usually involve handling large volumes of data. This places a considerable strain on the CPU and storage resources of the machine.

Depending on the data involved and the system configuration, the most likely errors are listed below, together with the steps required to correct them.

Error Handling in Client Copy and Transport

Error	Cause	Solution	Remarks
Write error in target client (1).	Usually a tablespace overflow.	Check system log to determine name of tablespace. Extend tablespace and repeat entire copy. You do not have to delete it first.	
System log messages <i>"Syn. MC maintenance deactivated fully"</i> and <i>"Buffer TABL/TABLP reset"</i> .		None.	These messages document special functions that are used to improve performance and guarantee consistency.
Termination in exit program after runtime of several hours (explanation in ABAP runtime error log).		Run log display to determine name of last exit program that has caused termination.	Client copy program has not terminated, but an application error has caused termination.