Team Approach 5.0.1
Understanding Outputs

Contents

Output Concepts

Overview of Queries and Outputs in TA

Queries and their outputs are related concepts in Team Approach[®] (TA). A query is a "question" you ask the TA database to find a set of TA records. The query is composed of a set of criteria. TA compares the records stored in the database to the criteria you determine and selects only those records that meet the criteria. The related output is the result of what you set TA to do with the information the query returns.

TA contains several kinds of outputs. When you run a query, you can schedule to run the query alone, or schedule to run one or more of these kinds of outputs with the query.

A user-defined output. This refers to the record you create using the User-defined Output Entry screen to identify the fields you want to output for records selected by a query. You can create an output in a file or table format. You can use output files or tables for activities like creating mailings and analyzing donors.

A report. This contains information based on the data in your database; this information is created by "manipulating" the data, e.g., subtotaling the data, totaling the data, and creating percentages based on the data. The data is pulled when you run the report with a query that selects the records on which you want to report. See "Report Descriptions " for more information.

An update procedure. This is an output that updates particular fields so that you can control (and track) actions such as sending benefits, solicitations, or acknowledgements. For example, when your organization wants to send acknowledgments, you set up a query to select the transactions that haven't yet been acknowledged (the acknowledge date field is blank). You run the Update Acknowledgement update procedure with the query so that TA will update the acknowledgment date field. The next time you need to mail acknowledgements, TA won't include the transaction since there is a value in the field. (To re-send an acknowledgement you can remove the value in the acknowledge date field so that TA picks up the transaction again.)

A custom output. TSI can create a custom output for a client to output information that cannot be output directly through a user-defined output. The custom output creates an output in the file format.

You may find the information in "Identifying Queries and Outputs You Can Schedule Together " helpful. Or see the Update Procedures book for more information about update procedures in general. See the Understanding Queries chapter for an explanation of queries. See the Scheduling Queries and Viewing Records Retrieved chapter to learn how to schedule an output with a query.

See Also:

Overview of User-defined Outputs

In TA, a user-defined output refers to the record you create using the User-defined Output Entry screen to identify the fields you want to output for records selected by a query.

For example, suppose your organization wants to mail a renewal solicitation. You set up one query to select the accounts that should receive the renewal solicitation. You then set up a user-defined output to indicate that, for each account selected, the value of the following fields should be pulled.

The Inside Salutation field which stores the name that should follow the greeting in a letter

The Salutation Line 1 field which stores the name that should be used on the mailing label

The Address Line field which stores the street number, street name, and apartment number

The Address Last Line field which stores the city name, state name, and ZIP Code

Your organization can then run the query with the user-defined output, which results in TA creating an output file (or possibly an Oracle® table) on your database server. For each account selected by the query, the output file contains the account's inside salutation, mailing name, and mailing address. For example, assume that Mr. John Smith of 9 Main Street in Cambridge, MA, 02138, is one of the records selected by the query. The output file would contain the following information for this record.

John

Mr. John Smith

9 Main St.

Cambridge, MA 02138

Though people sometimes create user-defined outputs in order to output data into an Oracle® table, you are more likely to create a user-defined output in order to output data into a flat file. Your organization can then merge, in-house or not, the output file with the renewal letter. (Note that a user-defined output does not manipulate or format the data; it only identifies the "raw" data that should be pulled and written to the output file or Oracle® table on the database server. You can import the output file into a third-party reporting tool, e.g., a spreadsheet application, to create your own reports.)

Types of Outputs

The output type identifies the kind of record from which to pull data. TA includes eight output types.

Output Type	Use	For example, assigned to the following standard output(s)
Accounts	To pull account-related information only.	Additional Gift Letter
Names	To pull name information.	Eliminator Template
Addresses	To pull address information.	Not applicable
Transactions	To pull transaction information.	Acknowledgment Letter

Output Type	Use	For example, assigned to the following standard output(s)
Benefits	To pull benefit information.	Club Mailing Template, Guide Tape
Interactions	To pull interaction information.	Customer Service Letter
Tributes	To pull tribute information.	Not applicable
Sources	To pull source information.	Not applicable
Planned Giving	To pull planned gift information	Not applicable

Output types correspond to the query types defined in the Understanding Queries chapter. Just as using a different query type changes the kind of record the query retrieves, using a different output type changes the kind of data pulled for each record.

For example, suppose Peter Clark gave three $1500 gifts to your organization during the current year.

You can create a user-defined output to pull *account information*, e.g., the account's giving level and current activity, by using the output type "Accounts."

You can create a user-defined output to pull *gift information*, e.g., the pledge amount and payment method, which might be different for each of Peter Clark's gifts, by using the output type "Transactions."

You could run the first user-defined output with a query to find *each account* that gave over $1000 during the current year (the query type is "Accounts"). When this query is run, it returns one record for Peter Clark's account, and the output file (or output table) contains Peter Clark's giving level and current activity.

You could run the second user-defined output with a query to find *each gift* over $1000 received during the current year (the query type is "Transactions"). When this query is run, it returns three records for Peter Clark's account. The output file (or output table) contains three records that list the pledge amount and payment method for each of Peter Clark's gifts.

Output Privileges

TA's output facility enables you to create, copy, update, test, and schedule user-defined outputs. Who "owns" the user-defined output and whether the user-defined output is marked as private determines which of these functions you can perform with a user-defined output.

A user-defined output is owned by the user who created it. If the user-defined output is associated with a user group, then it is also owned by the members of that user group.

An owner of a user-defined output can mark the user-defined output private to indicate that it can only be used by one of its owners.

This table illustrates user-defined output privileges.

	Owner	**Not Owner/ Public**	**Not Owner/ Private**	**pbadmin/ Public**
View	X	X		X

	Owner	Not Owner/ Public	Not Owner/ Private	pbadmin/ Public
Update	X			
Test	X			
Copy	X	X		X
Schedule/ Run	X			X

As you can see from the table, if you own the user-defined output, you can update, copy, test, and schedule it. Otherwise, you can:

Copy any other owner's public user-defined outputs.

Schedule only PBADMIN's user-defined outputs.

See Also:

When to Use the PBADMIN User (Outputs)

When to Use the PBADMIN User (Outputs)

TA is delivered with the username "PBADMIN." All standard user-defined outputs delivered with TA were created using the PBADMIN user. Staff at your organization should log into TA using the PBADMIN username and password to create each user-defined output that should be accessible to all staff members, e.g., regular production user-defined outputs such as your organization's membership renewal user-defined output and acknowledgment user-defined output. Staff at your organization should create user-defined outputs specific to their job responsibilities using their own user names.

Defaults for New User-defined Outputs

When you create a new user-defined output without copying an existing user-defined output, TA defaults the values of the following fields to the new record.

The Status field to "I" for inactive

The Output Format field to "DEL" for delimited file (with the following details: file name to the name of the user-defined output, sort order to "ZIP/ALPHA" for alphabetical by name within ZIP Code, and date format to "S" for standard)

The Sender field to "/D" for the default salutation

The Private field to "Y" to indicate the user-defined output is private

If you create a new user-defined output **by copying an existing user-defined output**, TA defaults the fields listed above to the values from the record you copied. In addition, TA defaults the value of the Output Type field and the output fields from the record you copied.

Overview of an Output Field

When you create a user-defined output, you select one or more output fields, which you can later modify by adding or deleting these output fields if necessary. An output field can be a database field or a calculated field. You run the user-defined output with a query. For each record selected by the query, TA pulls the data (value) for each output field included in the user-defined output and writes that value to the output file (or output table). The value of a database field or calculated field can be

A number,

One or more alphanumeric characters (i.e., letters and numbers),

A date, or

A currency amount.

For example, if you want to pull the gift date, pledge amount, gift kind, and payment method for a set of gifts, you create a user-defined output that includes each of these output fields. When the user-defined output is run with a query that selects a set of gifts, TA pulls the data for each gift selected. For example, one record may have 7/1/98 for the gift date, $1000 for the pledge amount, IN for the gift kind where "IN" means installments, and CK for the payment method where "CK" means check. TA writes these values to the output file (or output table).

The set of fields that can be used as output fields is different for different output types. If the output type is "Transactions," you can select fields that are related to gifts, such as gift type, pledge payment amount, or pledge amount. If the output type is "Accounts," you may not select these gift fields because an account may have more than one gift, and TA would not know for which gift to pull this data.

See Also:

Database Fields

Calculated Fields

Purpose of an Output Field's Sequence Number

Determining the Length of an Output Field

Database Fields

Database fields are stored in the database tables. The value for a database field is either set by you using a TA entry screen or calculated by TA based on information you enter into TA. For example, TA sets the total additional gifts the donor has given this calendar year, an account activity field, based on each additional gift you enter for the account.

Calculated Fields

All calculated fields begin with the "at" sign ("") to distinguish them from the database fields. The ability to create calculated fields is a powerful feature of TA that allows for great extensibility of the query tool. A calculated field:

Performs a calculation on database fields to create a value not stored in the database. The value of a calculated field is calculated at the time the user-defined output runs.

Selects a particular database field based on customized criteria.

In general, those calculated fields based on customized criteria are used for outputs but are also available for queries.

The calculated field "Pledge Payment Due" performs a calculation on database fields at the time the query is run; Pledge Payment Due represents the amount due on a pledge transaction.

The calculated field "Current Mem Year Amount Total" is based on customized criteria; Current Mem Year Amount Total sums the total of a donor's giving to the Radio activity type "R," the Television activity type "T," and the Television activity type "X." If your organization does not use these three activity types, your organization should not use this calculated field.

Related Topics:

Definitions of Calculated Fields by Category

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Purpose of an Output Field's Sequence Number

When you select output fields that are to constitute the output file or table you are creating, you can determine the order or sequence in which the data from those fields are written to the output. When you select an output field on the Fields to Output window, TA automatically defaults the sequence number for the field. TA starts by assigning the sequence number "10" to the first output field you enter and incrementing the sequence number by ten for each subsequent output field. You can change the sequence number to change the order.

Determining the Length of an Output Field

When you select an output field, TA defaults the length of the field you selected. You can change this length by entering a number, up to four digits in length, into the Length field on the Fields to Output window. When the user-defined output runs with a query, TA pulls the value for each output field from each record selected by the query. TA writes each value for each record into the output file (or Oracle® table). TA writes the value up to the length you indicated for the output field.

For example, suppose you select the Comments field from the Accounts table as one of the output fields for a user-defined output you create. TA defaults the length to 256. You could change the length to 100 if you want TA to write up to 100 characters of each comment to the output file (or output table) when you run this user-defined output.

See Also:

How the Output Format and the Field Length Work Together

How the Date Format, Output Format, and the Field Length Work Together

How the Output Format and the Field Length Work Together

The length of the value stored in the database or calculated by TA may be

Less than the length you entered for the output field,

Equal to the length you entered for the output field, or

Greater than the length you entered for the output field.

The output format you select determines how TA formats the value written to the output file. See "Output Format for Output Files" for more information about the types of output formats.

See Also:

Comma Separated, Quote Enclosed Format or the Delimited Format

Fixed Format

Table Format

Comma Separated, Quote Enclosed Format or the Delimited Format

If you select the comma separated, quote enclosed format or the delimited format on the User-defined Output Entry screen, TA writes the value to the output file but truncates the value only when it is longer than the length you entered for the output field.

For example, assume you select the Comments field from the Accounts table as one of the output fields for a user-defined output. TA defaults the field length to 256, and you change it to 100. TA pulls the comments for each record selected by the query with which the user-defined output is run.

One record selected contains a comment of 26 characters in length. TA writes those 26 characters to the output file using the output format you selected.

One record selected contains a comment of 100 characters in length. TA writes those 100 characters to the output file using the output format you selected.

One record selected contains a comment of 115 characters in length. TA writes the first 100 characters to the output file using the output format you selected; TA does not include the last 15 characters.

Fixed Format

If you select the fixed format on the User-defined Output Entry screen, TA writes the value to the output file by:

Adding spaces when the value is shorter than the length you entered for the output field.

Truncating the value when the value is longer than the length you entered for the output field.

For example, assume you select the Comments field from the Accounts table as one of the output fields for a user-defined output. TA defaults the field length to 256, and you change it to 100. TA pulls the comments for each record selected by the query with which the user-defined output is run.

One record contains a comment of 26 characters in length. TA writes those 26 characters plus 74 spaces (after the last character) to the output file using the fixed format. The value in the output file is 100 characters long, the 26 from the comment plus the 74 spaces.

One record contains a comment of 100 characters in length. TA writes those 100 characters to the output file using the fixed format.

One record contains a comment of 115 characters in length. TA writes the first 100 characters to the output file using the fixed format; TA does not include the last 15 characters.

Table Format

If you select the table output format on the User-defined Output Entry screen, TA writes the value to the Oracle® table but truncates the value only when it is longer than the length you entered for the output field.

For example, assume you select the Comments field from the Accounts table as one of the output fields for a user-defined output. TA defaults the field length to 256, and you change it to 100. TA pulls the comments for each record selected by the query with which the user-defined output is run.

One record selected contains a comment of 26 characters in length. TA writes the 26-character comment to the Oracle® table.

One record selected contains a comment of 100 characters in length. TA writes the 100-character comment to the Oracle® table.

One record selected contains a comment of 115 characters in length. TA writes the first 100 characters to the Oracle® table; TA does not include the last 15 characters.

How the Date Format, Output Format, and the Field Length Work Together

TA contains several date fields you can select as output fields. When you create a user-defined output that pulls dates, you need to indicate in what format TA should write the dates in the output file. TA contains four date formats: Standard (MM/DD/YY), European (DD-MON-YY), Standard plus 4 (MM/DD/YYYY), and Full (Month DD, YYYY).

Note: For these date formats, "DD" represents the day, "MM" represents the month, "MON" represents the first three characters of the month, "Month" represents the full name of the month, "YY" represents the two-digit year, and "YYYY" represents the four-digit year.

The date formats delivered with TA are the following maximum lengths.

The Standard date format length is eight.

The European date format length is nine.

The Standard with 4-digit year date format length is ten.

The Full date format length is seventeen.

For any date field you select as an output field, TA defaults the length to nine. When you select date fields as output fields, you need to consider both the date format and the output format for the user-defined output to determine whether you need to change the length for the date fields.

See Also:

Standard Format or European Format (Output Fields)

Standard Plus 4 Format or the Full Format

Standard Format or European Format (Output Fields)

If you use the Standard format or the European format for a comma-separated or a delimited file, you don't need to change the length of each date field in the user-defined output because the maximum length of the date is less than nine (the length TA defaults when you select a date field as an output field).

If you use the Standard format with the Fixed output format, TA adds blanks (spaces) to the right of the date because the maximum length of the Standard format is eight (one less than the length TA defaults when you select a date field as an output field).

If you use the European format with the fixed output format, you don't need to change the length of the date because the maximum length of the European format is nine (the same as the length TA defaults when you select a date field as an output field).

Standard Plus 4 Format or the Full Format

If you use the Standard plus 4 or Full formats, you'll need to manually set the length of each date so that the date is not truncated when it is written in the output file **regardless of the output format.** When you use the Standard plus 4 or Full formats, the maximum length of the date is greater than nine (the length TA defaults when you select a date field as an output field).

Information Specific to Creating an Output File

Though people sometimes create user-defined outputs in order to output data into an Oracle® table, you are more likely to create a user-defined output in order to output data into a flat file.

When you create a user-defined output on the User-defined Output Entry screen, TA defaults the format of the output to a type of file. TA also defaults how the data in the file should be sorted and what type of date format should be used. You can change this information for each user-defined output as necessary.

Naming Convention for User-defined Outputs

The name of each standard user-defined output delivered with TA begins with the letters "TA." You should follow the conventions your organization has set up to name user-defined outputs, e.g., begin each user-defined output you create with your initials or with the initials of the department that will use the user-defined output.

See Also:

How TA Creates an Output File

How TA Creates an Output File

A user-defined output identifies the data you want TA to pull for each record selected by the query with which the user-defined output is run. The data pulled is based on the database fields or calculated fields you select to output, e.g., gift kind, account type. When you run the user-defined output with a query, TA creates on the database server an output file with the data from the records selected by the query by completing the following steps.

1. TA creates an output file on the database server. TA names the file based on the filename you entered for the user-defined output.

2. TA creates one record in the output file on the database server for each record selected by the query with which the user-defined output is run.

3. TA writes to each record in the output file the data for each field you selected to output. If you selected gift kind and account type in the user-defined output, the output file would contain the values for these fields for each record.

4. TA sorts the records written to the output file in the order you identified when you set up the user-defined output.

In rare cases, TA may create fewer records in the output file than the number of records selected by the query. For example, you run the query without a user-defined output and save the results. You re-run the query, using the saved records, with the appropriate user-defined output. If delete processing has run between the time you ran the query to select the records and the time you ran the query with the user-defined output, and, in that time, some of the records selected were marked for deletion, delete processing removed those records from the database.

Note: See the Scheduling Queries and Viewing Retrieved Records chapter to learn how to run a query without an output, save the results, modify the results, and then re-run the query with one or more outputs.

Output Format for Output Files

The output format indicates how TA should demarcate each value for each record in the output file created when the user-defined output is processed. This demarcation enables you or a vendor to "read" the file and understand when one value ends and the next begins.

You can press the [F9] key from the Output Format field to view the list of output formats. TA includes the following formats.

"CSV" for comma separated, quote enclosed

"DEL" for delimited

"FIX" for fixed

When you create a user-defined output, TA defaults the output format to "DEL" for delimited unless you created the user-defined output by copying an existing user-defined output.

Note: If your organization wants to define a new output format, please contact Target Software, Inc.

For each record selected by the query with which a user-defined output is run, TA creates one record in the output file. TA writes to that record the values for the fields defined in the user-defined output. TA marks the end of the record in the output file with a line feed character.

Note: Some database programs such as Microsoft Access expect records to be terminated by a carriage return. You can change an output format's record terminator to include a carriage return on the Output Format Code Entry screen by marking the Append Carriage Return? checkbox.

See "How TA Creates an Output File" for an explanation of when TA may not create one record for each record selected by the query.

See Also:

The Comma Separated, Quote Enclosed Format

The Delimited Format

The Fixed Format

How TA Writes a Currency Amount in an Output File

The Comma Separated, Quote Enclosed Format

The comma separated, quote enclosed format means that each value written to the output file is enclosed in double quotes and separated from the next value by a comma. Numbers including currency amounts are the exception to this formatting; if a value is a number, the number is not enclosed in double quotes.

For example, suppose you create a user-defined output that contains only the gift date, the payment method, the gift kind, and pledge amount as output fields. When you run this user-defined output with a query, TA creates an output file. Assume that the gift date is 7/1/98, the payment method is "CK" for check, the gift kind is "IN" for installment, and the pledge amount is $120 for one of the records selected by the query. For this record, TA writes the following in the output file.

```
"7/1/98","CK","IN",120.00
```

The Delimited Format

The delimited format means that each value is separated from the next value by a "delimiter. " The delimiter can be one or more characters. The default delimiter in TA is the tab character.

For example, suppose you create a user-defined output that contains only the gift date, payment method, the gift kind, and pledge amount as output fields. When you run this user-defined output with a query, TA creates an output file. Assume that the gift date is 7/1/98, the payment method is "CK" for check, the gift kind is "IN" for installment, and pledge amount is $120 for one of the records selected by the query. For this record, TA writes the following in the output file where the tilde ("~") represents the tab character.

```
7/1/98~CK~IN~120.00
```

You can specify your own delimiter character for files. In the User-Defined Output Entry screen, zoom on the Output Format field. In the Delimiter field (which defaults to /9, the ASCII equilivalent to tab), enter the specific character that you want to be used to separate the fields in the file. You need to enter the ASCII code if you want to use non-printing characters (such as in the Tab example).

The Fixed Format

The fixed format means that the length of each field is fixed in the output file. For each output field you select, TA defaults the length of the field; you can change that length. TA uses the field length you enter for each output field as the length for the output file. Given that a field's value may be shorter than the fixed length, TA pads the value with blanks (spaces) to "fill" the length. TA adds these spaces to the right of the value.

Note: See "Determining the Length of an Output Field" for an explanation of the field length and how to change that length.

For example, suppose you create a user-defined output that contains only the gift date, payment method, the gift kind, and the pledge amount as output fields; when you selected these fields, you did not change the field length defaulted for each by TA. The Gift Date field's length is 8, the Payment Method field's length is 2, the Gift Kind field's length is 2, and the Pledge Amount field's length is 11. When you run this user-defined output with a query, TA creates an output file. Assume that the gift date is 7/1/98, the payment method is "CK" for check, the gift kind is "IN" for installment, and the pledge amount is $120 for one of the records selected by the query. For this record, TA writes the following in the output file where the asterisk ("*") represents a space.

```
        7/1/98**CKIN120.00*****
```

TA adds 2 spaces after the gift date because the Gift Date field's length of 8 is used as the fixed length for the value in the output file but the record's value is only 6 in length. TA adds 5 spaces after the pledge amount because the Pledge Amount field's length of 11 is used as the fixed length for the value in the output file but the record's value is only 6 in length

Note: This example assumes the date format for the user-defined output is the standard format.

How TA Writes a Currency Amount in an Output File

If the output field you select stores an amount identified in TA as a currency field, then TA pulls the value in the field including the decimal point and two places to the right of the decimal point.

For example, suppose you select payment amount as an output field. If the payment amount for one record is $0, then TA writes "0.00" in the output file. If the payment amount is $12.50 for a different record, then TA writes "12.50" in the output file.

TA writes a currency amount with the decimal point plus two places to the right regardless of the output format you select.

Sort Order for Output Files

The sort order specifies how the records to be written to the output file should be sorted in the output file. TA includes several standard sort orders but your organization can create new ones if needed. You can press the [F9] key from the Sort Order field to view the list of sort orders.

The sort order can specify up to five database or calculated fields by which to sort the records. When you select a sort order, you do not need to include the fields used for the sort order as output fields. You only need to include as output fields those fields necessary for the output file, e.g., those fields to be printed in the merge letter for which the output file is being produced.

When you create a user-defined output, TA defaults the sort order to "ZIP/ALPHA" unless you created the user-defined output by copying an existing user-defined output. The ZIP/ALPHA code sorts the records for the output file alphabetically by name within the ZIP Code, with the ZIP Codes in ascending order. When you copy an existing user-defined output, TA defaults the sort order to the one for the user-defined output you copied.

Output File Filenames

For TA to create the output file on the database server, you must enter the name TA should use for that file. When you create a user-defined output, TA defaults the name you entered for the user-defined output as the filename for the output file on the database server. TA automatically formats the name to conform to the standards of the database server's operating system when TA creates the file on your database server.

You can change the name if you don't want the name to be that of the user-defined output. You can also change the name at the time you schedule the user-defined output to run with a query.

See the Scheduling Queries and Viewing Records Retrieved chapter to learn how to schedule a user-defined output with a query.

Date Format (Output Fields)

If one or more of the output fields you select for this user-defined output is a field that stores a date, you must indicate what format TA should use to write the date in the output file. You can press the [F9] key from the Date Format field to view the list of date formats. TA includes the following date formats.

"E" for the European format, i.e., DD-MON-YY

"F" for the Full date format, i.e., Month DD, YYYY

"S" for the Standard date format, i.e., MM/DD/YY

"S2" for the Standard date format with a four-digit year, i.e., MM/DD/YYYY

Note: For these date formats, "DD" represents the day, "MM" represents the month, "MON" represents the first three characters of the month, "Month" represents the full name of the month, "YY" represents the two-digit year, and "YYYY" represents the four-digit year.

When you create a user-defined output, TA defaults the date format to "S" for the Standard date format unless you created the user-defined output by copying an existing user-defined output. When you copy an existing user-defined output, TA defaults the date format to the one for the user-defined output you copied.

Depending upon the date format and the output format you select, you may need to change the length of each date field you select as an output field. See "How the Date Format, Output Format, and the Field Length Work Together" to learn how the output format affects how dates are written to the output file based on the date format you select and the length of each date field.

Note: If your organization wants to define a new date format, please contact Target Software, Inc.

Information Specific to Creating an Output Table

If you want to analyze a large segment of accounts by a combination of different variables, you might want to output data directly into an Oracle® table, rather than into a flat file. Because the table is not part of TA, you can index it for specific queries, which allows you to run your own reports off of the data very quickly. You can also use a third-party tool to work with the data in a way that you can't easily work with a flat output file.

For example, you can run a query to take a snapshot of a large group of donors, and you can then create an Oracle® table that includes information such as Account ID, address (usually the preferred, but a different address in some cases), three highest interests, largest "recent" amount given to the organization (the recency period is defined by a system preference), amount of most recent gift, date of most recent gift, and a multitude of other fields. You can now analyze the donors in all sorts of ways to help you make decisions about segmentation for future mailings.

When you create an Oracle® table, you can choose to store it on the current database or an external database. You can also set up any number of indexes on the table. The table, once it is created, contains not only the fields you specified, but other important information used in Oracle® tables such as the foreign key structure (which enable references from one record to another); this helps make the table more flexible and powerful than a flat output file.

Note: Before you can create an Oracle® table, you must create one or more tablespaces. The tablespace defines where a table is stored on a database. Contact your database administrator or TSI to create a tablespace for you. See Technical Steps for the System/Database Administrator to Set Up a Database Link to a Remote Database. Also, see Technical Steps for the System/Database Administrator to Allow You to Create Tables on the Current Database.

See Also:

Table Output Options

Table Output Options

There are a number of options that you can set on a user-defined output that specifically pertain to creating an Oracle® table. These options are different from the ones you set when creating an output file. (For example, you do not set the sort order and date format for an Oracle® table). Each of the options that you set to create an Oracle® table is briefly introduced below. For detailed information about each of these options, refer to your Oracle® documentation. Note that in most cases, TA defaults this information for you, and you should not need to change it. However, if you are experienced with Oracle® tables and feel comfortable changing this information, you can do so.

Table Name

This is the name of the Oracle® table. All names must start with TA_OUT. They must also contain only alphanumeric characters and the special characters $, _, and #, and conform to other Oracle® rules for table names. TA defaults the table name to the name of your output, preceded by TA_OUT. For example, if your output is called "PG DONORS" TA defaults the table name to "TA_OUT_PG_DONORS." You can change the table name if desired, though you cannot duplicate any TA table names.

Note: If you change the name to something that doesn't start with TA_OUT, TA modifies the name so that it does start with TA_OUT.

Database Link

The table can either be created on the current database or on a remote database. The database link identifies the link to use to create the new table on a remote database. Unless a database link has been set for you as a user preference, this field is blank by default, which indicates the current database. You can press the [F9] key to select from a list of database links.

Schema

The schema is a collection of related database objects grouped by Oracle® user. If the table is being created on the current database, you can press the [F9] key to select from a list of Oracle® users on the database. Otherwise, TA sets the schema to TA_REMOTE.

Tablespace

The tablespace defines where a table is stored on a database, and corresponds to a physical datafile. If the table is being created on the current database, you can press the [F9] key to select from a list of tablespaces available on the database. You can set the tablespace for both the table and any indexes you are creating. If the table is being created on a remote database, TA sets the tablespace to TA_REMOTE.

Note: You must have had a database administrator or someone at TSI create one or more tablespaces for you at this point. You can only select a tablespace that already exists.

Initial Extent for the Table and Index(es)

The initial extent sets the number of kilobytes that the table (and index) will take up on the database when it is initially created. If the table is being created on the current database, TA defaults the value associated with the tablespace but let's you change the size if desired. If the table is being created on a remote database, TA uses the default initial extent for the remote database; TA does not display that value.

Indexes

An index is an object that allows the table to be searched by specific columns. Creating indexes can enable you to access information in the table faster than without the indexes, but each index takes up extra space on the database. You can enter a list of columns in the Index block to indicate which search columns are to be used more quickly. (Note that the columns available correspond to the fields included in your output.)

Technical Steps for the System/Database Administrator to Allow You to Create Tables on the Current Database

1. Log into SQL*PLUS as the SYS user.

    - GRANT SELECT ON DBA_TABLESPACES TO PBDS;

2. Log into SQL*PLUS as the SYSTEM user.

    - GRANT CREATE TABLE TO PBDS;

    - GRANT ALTER TABLESPACE TO PBDS;

    - GRANT CREATE INDEX TO PBDS;

Technical Steps for the System/Database Administrator to Set Up a Database Link to a Remote Database

Note: Follow the steps below once for each database link you want to use for Oracle® table outputs.

1. Create tablespace ta_remote on the remote database.

2. Create user ta_remote on the remote database and give the user the following privileges:

    - ALTER USER TA_REMOTE DEFAULT TABLESPACE TA_REMOTE

    - ALTER USER TA_REMOTE TEMPORARY TABLESPACE < TEMPORARY TABLESPACE>
      *replace <Temporary Tablespace> with the name of the Temporary Tablespace on the remote database.

    - ALTER USER TA_REMOTE QUOTA UNLIMITED ON TA_REMOTE

    - GRANT CREATE SESSION TO TA_REMOTE

    - GRANT CREATE PROCEDURE TO TA_REMOTE

    - GRANT CREATE TABLE TO TA_REMOTE

    - GRANT DROP ANY TABLE TO TA_REMOTE

    - GRANT INSERT ANY TABLE TO TA_REMOTE

    - GRANT ALTER TABLESPACE TO TA_REMOTE

    - GRANT CREATE ANY INDEX TO TA_REMOTE

3. Connect thru SQL*PLUS as the Sys user. If your site has never changed the sys user's password, the command to connect is: sys/manager<database name>

    - GRANT SELECT ON DBA_ROLLBACK_SEGS TO TA_REMOTE

4. Compile the following procedure on the remote database: Dp_Exec_Ddl_Or_Plsql

    i.   With a UNIX connection, navigate to $PBDS_HOME/patch/ptch4000
    ii.   Log into SQL*PLUS as the TA_REMOTE user
    iii. Type: syndsprc.sql   <return>

5. Create the database link, using the following statement (it is broken into three lines below for clarity):

> CREATE DATABASE LINK <link>
>
> CONNECT TO TA_REMOTE IDENTIFIED BY <ta_remote password>
>
> USING '<connect string>'
>
> *<connect string> is the SQL*NET connect descriptor for the remote database.

Contact TSI Support if you need assistance.

Important Information About the Table Output

When you run an account-level output to produce an output file, TA returns only one record per account. Likewise, when you run a transactions-level output to produce an output file, TA returns only one record per transaction. This type of logic applies to all query/output types when creating output files.

However, when you use TA's query/output tool to create an Oracle® table, there are some cases where TA may return more than one record for the type of data you are pulling. This has to do with the join conditions, and could happen when you output data from any of the following TA tables:

Classifications (only if the classifications being output are non-unique--an account may have multiple records with the same classification code, but different classification values)

Education

Financial Research

Interests

Other Charitable Giving

Prospect Ratings

Charity

Duplicate Merges

Relationships

For example, when you run an accounts-level query and include a field from the Interests table in the corresponding accounts-level user-defined output, TA may return more than one interest record per account in the resulting Oracle® table.

When you use TA's query/output tool to output data from any of the tables above into an Oracle® table, if you want to limit to only one record from those tables, you should check the records returned and retain only the one you wanted. You can also contact TSI Support for help.

Parenthetical Information in the List of Output Fields

TA may include parenthetical information following the field name for some output fields. One of the following kinds of information is noted in the parentheses.

The information identifies the record that will be selected by the user-defined output.

The information identifies the table that the user-defined output will reference when a field appears in multiple tables.

The information identifies the type of record.

The Last Fiscal Year Paid Amount field is an example of a calculated field that has been programmed to sum the total payment amount for the previous fiscal year for the annual giving activity type (i.e., activity type = "A") and the matching gift activity type (i.e., activity type = "G"). In the list of output fields, this field appears as "LAST FISCAL YEAR PAID (ANNUAL AND MATCHING)." If your organization does not use these two activity types, your organization does not need to use this calculated field.

The Account ID field is an example of a database field that is included in many tables. When the Account ID field is included in the list of fields to output, the table name, such as Accounts, Names, or Transactions, is included in parentheses.

If your organization uses attributes to help define benefits and/or service providers, or has a list of questions that appear on the Inquiry and Referral screen, you will see these fields followed by the identifiers Benefit Attributes, Service Provider Attributes, or Questionnaire.

See Also:

When to Select a Field from Query Retrieved

Giver, Recipient, and Acknowledged

When to Select a Field from Query Retrieved

Each output type has a corresponding query type. When you run a query, TA automatically returns the values for a selected set of fields based on the query type. When you select the output type for a user-defined output, TA includes in the list of output fields those fields for which the matching query type automatically returns a value. For this group of fields, each one's value is stored in the Query Retrieved table. You can view this information using the Query Retrieved screen.

When you set up a user-defined output, if an output field is available from two or more tables, one of which is the Query Retrieved table, select the one from the Query Retrieved table. TA processes the user-defined output more quickly when it can use the field's value from the Query Retrieved table as compared to any other table in TA.

See the Understanding Queries chapter for an explanation of the query type and the data TA automatically returns with each query type. See the Scheduling Queries and Viewing Records Retrieved chapter for an explanation of the Query Retrieved screen.

Giver, Recipient, and Acknowledged

When the output type for the user-defined output is set to "Benefits" or to "Transactions," TA may include parenthetical information to the right of the field name for some fields you can select.

Benefits Queries

For the Benefits output type, the benefit information includes the account of the giver of the benefit and the account of the recipient of the benefit. Most of the time the giver and the recipient are the same, but sometimes, as with a gift membership, they are not.

For a benefits user-defined output, when you select a database field that relates to account or transaction information, TA adds "(RECIPIENT)" as the suffix to the field name to indicate that by default TA will return the recipient's information rather than the giver's information. For example, if you select the field "TAX VALUE," TA displays this field as "TAX VALUE (RECIPIENT)" to identify that the tax value for the benefit recipient will be pulled.

Note: TA also adds "(BENEFIT ATTRIBUTE)" as the suffix to the field name if the field represents an attribute that helps define the benefit.

Transaction Queries

For the Transactions output type, the transaction information includes the account of the giver of the gift and the account acknowledged for the gift. Most of the time the giver and the account acknowledged are the same, but sometimes they are not (e.g., soft credit transactions).

For a transactions user-defined output, TA adds "(GIVER)" as the suffix to the field name to indicate that by default TA will return the giver's information rather than the acknowledged's information. For example, if you select the field "STREET NAME," TA displays this field as "STREET NAME (GIVER)" to indicate that the street name of the address for the giver will be pulled.

Additional Criteria for Some Output Fields

For some output fields, you must enter additional criteria for TA to select the correct piece of data. For example, you can select any field from the Account Activities table which includes fields such as the largest recent gift and the account's giving level. However, an account can have multiple account activity records, e.g., Annual Giving or Capital Campaign. To select the data from the correct record, you must specify which account activity record TA should use for that field.

If you select an account activity field, an interest field, or a classification field as an output field, you must enter additional criteria for TA to select the value from the correct record. When you enter one of these fields into the Field Name field on the Fields to Output window and press the [Tab] key, TA automatically displays the Criteria for Selection Field window. TA positions the cursor in the Other Criteria field on the Criteria for Selection Field window. The Other Criteria field contains the beginning portion of the SQL statement you must complete to identify the correct record. See "Entering Additional Criteria for Selected Output Fields" for more information.

See Also:

About the Criteria for Selection Field Window

About the Criteria for Selection Field Window

The Criteria for Selection Field window contains the following information.

- The name of the output field

- The name of the table in which the database field is stored or with which the calculated field is associated

- The table's alias

- The expression if the field is a calculated field

- The join conditions to be used to join the table in which the field is stored to the Query Retrieved table

- The other criteria

See Also:

Defining Table Aliases (Criteria for Selection Field window)
Expressions (Criteria for Selection Field window)
Join Conditions (Criteria for Selection Field window)

Defining Table Aliases (Criteria for Selection Field window)

The table alias is an abbreviation used to represent the table in the join conditions and in the Other Criteria field. In SQL, if you write a statement referring to a field in a table, you can write the reference in the format "tablename.fieldname." Sometimes, table names can be very long. As an alternative to writing the table's name each time, SQL allows you to assign to a table an "alias" which you can use in place of the table's name, i.e., you can write "alias.fieldname" where "alias" is the name you selected to represent the tablename.

Since SQL statements for user-defined outputs can be very long and complicated, the output facility is programmed to use an alias for the table name when it generates the SQL statement. The Alias field indicates what the alias is for the table named in the Table Name field.

See "When Testing a User-defined Output Changes the Table Aliases" for an explanation of the SQL statement TA generates when you test the user-defined output.

Expressions (Criteria for Selection Field window)

When you select a calculated field as an output field, the SQL expression that performs the calculation appears in the Expression field on the Criteria for Selection Field window. You should never need to modify this field. If you think you need to modify the expression, please contact Target Software, Inc.

Join Conditions (Criteria for Selection Field window)

The join condition indicates how the TA output facility joins the table in which the field you selected is stored to the table identified by the output type. In SQL language, you can "connect" (join) two tables based on fields that both tables have in common. For example, in TA, the Accounts table stores account-level information including the Account ID which is unique. The Names table stores name information, including the Account ID for each name. TA can connect an Accounts record with all of the Names records for the account by *joining* them using the Account ID.

For a user-defined output, join conditions nearly always have the format:

<table alias (usually T0 or T1)>.<column_name> = <table alias>.<column name> (+)

where the table alias on the right side of the equals sign ("=") should be the alias from the Alias field. For example, suppose the table name is ADDRESSES and the alias is T3. Then the join condition would probably be:

```
T0.ACCOUNT_ID = T3.ACCOUNT_ID (+) AND T0.ADDRESS_ID = T6.ADDRESS_ID (+)
```

You should not have to modify this field. If you think you need to modify the expression, please contact Target Software, Inc. However, when you are troubleshooting a problem with a user-defined output, it is useful to check this field. **If this field does not have the general structure shown in the example above, the join condition may be causing the problem.**

The Join Conditions field should be blank whenever the Alias field is T0.

Additional Output Processing Options

You can set up additional processing options for a user-defined output. The following table lists each field or button with the option that the field or button controls.

Field or Button	Option
Sender	Identifies the salutation to use
Alternate Sender	Identifies the alternate salutation to use
Private	Indicates whether the output is private or public
<Linked	Controls links between this user-defined output and one or more other user-defined outputs,

Field or Button	Option
Outputs>	update procedures, or reports

Sender and the Alternate Sender Fields

When you create a user-defined output, if the output fields include salutation information, you can indicate what salutation to use by setting the Sender field and, if appropriate, the Alternate Sender field. When TA processes the user-defined output, TA pulls the salutation information by implementing the following rules for each record selected by the query with which this user-defined output is run.

1. Use the salutation identified by the salutation code in the Sender field.

2. If you have both a sender and an alternate sender assigned, but the name associated with the record pulled by the query doesn't have a salutation associated with the Sender, use the salutation identified by the Alternate Sender field.

3. If the record does not have a salutation identified by the Alternate Sender field, use the record's default salutation.

See the [Managing Account Information chapter](#) for an explanation of the default salutations TA creates and how to create signature-specific salutations.

Private Field

When you create a user-defined output, you can indicate whether the user-defined output is a private or a public user-defined output. A private user-defined output is accessible only to the [owner of the user-defined output](#). A public user-defined output is accessible to all users for viewing and copying.

See "[Output Privileges](#)" for an explanation of the impacts of marking a user-defined output as private or public.

Linked Outputs

When you create a user-defined output, you can link one or more outputs (i.e., user-defined output, a report, or an update procedure) to it so that each "linked" output is scheduled to run when the user-defined output you created is scheduled to run.

For example, you can create a user-defined output for an event invitation and link the update procedure "Create Interaction" to the user-defined output. If you link this procedure to the event invitation user-defined output, whenever the event invitation user-defined output is scheduled, TA automatically schedules the Create Interaction update procedure to run with it.

Note: At the time you schedule a user-defined output to run with a query, you can delete a linked output that TA automatically includes. See the [Scheduling Queries and Viewing Records Retrieved chapter](#) to learn how to schedule an output with a query.

Linked Output Statuses

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Understanding Outputs

When you link a user-defined output, update procedure, or report to the user-defined output with which you are working, TA defaults the status of the linked output to "A" for active. Two statuses exist for a linked output.

The active status means that linked output will run when the user-defined output is scheduled to run.

The inactive status ("I") means that the linked output will be included on the schedule record when you schedule the user-defined output to run with a query but the linked output won't run unless you change the status on the schedule record to active.

You can change the status of a linked output from active to inactive on Outputs to Schedule with this Output window.

See the Scheduling Queries and Viewing Records Retrieved chapter to learn how to schedule an output to run with a query and how to change the status of an output scheduled to run with the query.

Using a Note to Describe the User-defined Output

After you have entered the information for a user-defined output, you can use the Notes field to describe

The purpose of the user-defined output,

The fields which will be written to the output file (or output table), and

The processing options selected for the user-defined output.

By using the Notes field, you can enter a description "in English" of the user-defined output along with the reasoning for the structure of the user-defined output to enable other users to understand what the user-defined output will select and why it is set up as is. For example, you may want to include whether the output file created is to be used with specified merge documents and the name of the documents. You can access the Notes field by clicking <Notes>.

Important: Test the User-defined Output

The User-defined Output Entry screen enables you to create a user-defined output without needing to consult a programmer. When you test the user-defined output you created, TA generates the actual SQL statement, which states

What data to pull from the fields you selected as output fields including the appropriate salutation, if applicable,

How to format the dates if date fields are included as output fields in an output file,

How to order the data in an output file,

How to sort the records in an output file, and

How to demarcate one value from the next in an output file.

If the SQL statement generates successfully, TA sets the user-defined output's status to "A" for active. Once a user-defined output is activated, the user-defined output is available for scheduling.

See the Scheduling Queries and Viewing Records Retrieved chapter to learn how to schedule a user-defined output to run with a query.

See Also:

When Testing a User-defined Output Changes the Table Aliases

When Testing a User-defined Output Changes the Table Aliases

When TA generates the SQL statement for the user-defined output, TA changes the table alias used in the statement only for those fields that reference the same record in the same table.

For example, assume that your organization has an activity type of "A" for Annual Giving and that you select only the following account activity fields for a user-defined output: Current Activity, Giving Level, and Expiration Date. When you select each field, TA automatically displays the Criteria for Selection Field window because more than one account activity record can exist for an account. The statement "T#.ACTIVITY_TYPE(+) =" (where "#" represents a number) appears in the Other Criteria field. You must complete this statement to indicate from which account activity record the value should be pulled.

When you select the Current Activity (ACCOUNT ACTIVITIES) output field, the statement "T**1**.ACTIVITY_TYPE(+) =" appears in the Other Criteria field on the Criteria for Selection Field window. "T1" is the table alias TA assigns for the Account Activity table. You would complete the statement by entering the Annual Giving activity type code in single quotes.

T1.ACTIVITY_TYPE(+) = 'A'

When you select the Giving Level (ACCOUNT ACTIVITIES) output field, the statement "T**2**.ACTIVITY_TYPE(+) =" appears in the Other Criteria field on the Criteria for Selection Field window. "T2" is the table alias TA assigns for the Account Activity table. You would complete the statement by entering the Annual Giving activity type code in single quotes.

T2.ACTIVITY_TYPE(+) = 'A'

When you select the Expiration Date (ACCOUNT ACTIVITIES) output field, the statement "T**3**.ACTIVITY_TYPE(+) =" appears in the Other Criteria field on the Criteria for Selection Field window. "T3" is the table alias TA assigns for the Account Activity table. You would complete the statement by entering the Annual Giving activity type code in single quotes.

T3.ACTIVITY_TYPE(+) = 'A'

When you test the user-defined output, TA changes the table alias for the Giving Level field and the Expiration Date field to the same one used for the Current Activity field since the values for all three fields are to be pulled from the Annual Giving record (activity type = "A") of the Account Activities table.

Note: The table aliases used in this example assume that you enter only these three fields in the following order: current activity first, giving level second, and expiration date third. If you enter the fields in a different order or enter them along with other output fields, then the table alias assigned to each will not necessarily be the one used in this example.

To see that TA changed the table aliases, you can click <Fields to Output> to access the Fields to Output window. From each field, you can press the [F10] key to access the Criteria for Selection Field window. On this window, you will see the table alias assignment for each field is now T1.

Note: You must enter the Annual Giving activity code in the exact same way for all three fields for TA to change the table alias as noted. If, for example, you enter a space after the equal sign and before the single quote for the first two fields (Current Activity and Giving Level) but you do not enter a space after the equal sign and before the single quote for the Expiration Date field, TA changes the table alias to T1 only for the Giving Level field.

User-defined Output Statuses

For each user-defined output, TA sets the status of the user-defined output in the upper right corner of the User-defined Output Entry screen. You cannot update the Status field; it is a display-only field.

TA sets the status of the user-defined output based on the actions you take.

Status	Description
"A" Active	TA activates a user-defined output, i.e., sets the user-defined output's status to "A" for active, in two situations.

- You successfully tested a user-defined output you created, i.e., the test is error-free. See "Testing a User-defined Output" to learn how to test a user-defined output.

- You copy an existing active user-defined output. The status remains active until you change any of the information for the user-defined output.

Once a user-defined output is activated, you can schedule the user-defined output to run, copy it, and use it as a linked output for other user-defined outputs.

Status	Description
"C" Changed	TA sets a user-defined output's status to "C" for changed whenever you change any of the following information for an active or inactive user-defined output.

- The output type

- The output format

- The sort order

- The date format

- The output fields

You cannot schedule the user-defined output to run, copy the user-defined output, or use the user-defined output as a linked output until you activate it. To activate the user-defined output, you must test it. See "Testing a User-defined Output" to learn how to test a user-defined output.

Status	Description
"D" Delete	TA sets a user-defined output's status to "D" for delete when you click <Delete> on the toolbar.
"E" Errors	TA sets a user-defined output's status to "E" for errors when you test the user-defined output, and it contains errors. See "Errors with User-defined Outputs."

You cannot schedule the user-defined output to run, copy the user-defined output, or use the user-defined output as a linked output when the user-defined output is in error.

Status	Description
"I" Inactive	TA sets a user-defined output's status to "I" for inactive in three situations.

- You create a user-defined output by copying an existing inactive user-defined output.

- You exit a user-defined output whose status is changed. When you exit an untested user-defined output, TA displays the message "Output was changed and not tested. Leave record or test output first?" If you click <Leave Record> to leave the user-defined output without testing it, TA changes the status of the user-defined output to "I" for inactive.

- You click <Undelete> on the toolbar to unmark a user-defined output that has been marked for deletion.

You cannot schedule the user-defined output to run, copy the user-defined output, or use the user-defined output as a linked output until you activate it. To activate the user-defined output, you must test it.

Special Keys

When you use the User-defined Output Entry screen, selected actions require the use of a specific key or key combination from the Field Name field, and the Linked Output Name field.

Field Name Field

The following table lists the key(s) you need to press to perform a particular task from the Field Name field on the Fields to Output window.

The action or task you want to perform	The key(s) to press
Create a new line to enter a new output field within a set of output fields.	[F6]
Delete an output field.	[Shift] [F6]
Enter additional, required criteria for the output field.	[F10]
View the related fields for the output field you selected when output type is benefits or transactions.	[Ctrl] [Alt] [F9]

Linked Output Name Field

The following table lists the key(s) you need to press to perform a particular task from the Linked Output Name field on the Outputs to be Scheduled with this User-defined Output window.

The action or task you want to perform	The key(s) to press
Create a new line to enter a new output to link with the user-defined output.	[F6]
Delete a linked output.	[Shift] [F6]

Outputs Step-by-step

Working with New Outputs

To create a new user-defined output you must first access the Create New Output window. You can then create a user-defined output that is either completely new or based upon an existing user-defined output.

See Also:

Accessing the Create New Output Window

Creating a new user-defined output begins with accessing the Create New Output window. To access this window, access the User-defined Output Entry screen.

If you were not working on this screen previously, TA displays a message from which you should click <New> to create a new user-defined output.

If your current user-defined output, i.e., the last user-defined output with which you worked during your current session, appears, click <New> on the TA toolbar to create a new user-defined output.

In both cases, the Create New Output window appears.

Creating a New User-defined Output

To create a new user-defined output, complete the following steps.

1. Access the Create New Output window.

2. Enter the name of the new user-defined output in the New User-defined Output Name field. This name must be unique, i.e., different from all other user-defined outputs. You can enter a name up to 20 characters in length including spaces, underscores, and periods.

3. If you want to copy an existing user-defined output, enter its name in the Copy Existing User-defined Output field. You can press the [F9] key to view the list of user-defined outputs you can copy. This list consists of those user-defined outputs marked as public and those user-defined outputs you own.

   Note: You can only copy a user-defined output that you own or that is public. You cannot copy another owner's private user-defined output. See "Additional Output Processing Options" to learn how to mark a user-defined output for public or private use.

4. Click <Create>. The new user-defined output appears on the User-defined Output Entry screen; you can set up the user-defined output as appropriate.

Related Topics:

Setting Options Specific to Output Files

Setting Options Specific to Output Tables

Working with Output Fields

Copying an Existing User-defined Output After You Create a New One

To copy an existing user-defined output **after you have created the new user-defined output,** complete the following steps.

Note: If you entered any information, including output fields, for the user-defined output with which you are working and copy an existing user-defined output, TA overwrites the information you entered with that from the record you copied.

1. From the user-defined output with which you are working, click <Copy From> to access the Copy Existing User-defined Output window.

2. Enter the name of the user-defined output you want to copy in the User-defined Output Name field. You can press the [F9] key to view the list of user-defined outputs you can copy. This list consists of those user-defined outputs marked as public and those user-defined outputs you own.

3. Click <OK>. The new user-defined output appears on the User-defined Output Entry screen; you can modify the user-defined output as needed.

Note: If you do not own the query you want to copy or update, the <Copy From> button is disabled.

Setting Options Specific to Output Files

When you create an output, TA defaults the output format to "DEL" for delimited file and also defaults the name of the output file, the sort order, the date format, and the delimiter. You can view this information in the Details field. To change any of the information, you can zoom from the Output Format field to access the File Output Options window. You can press the [F9] key in any of the fields to choose from a list of values, with the exception of the File Name field, which is a free-text field.   See "Information Specific to Creating an Output File" for more information.

Setting Options Specific to Output Tables

When you create an output, TA defaults the output format to "DEL" for delimited file, and sets other information specific to a file output format. If you want to create an output table, change the text in the Output Format field to

"TABLE". When you leave the Output Format field, TA displays the Table Output Options window, where you can set the table name, database link, schema, indexes, and storage information for the table. See "Table Output Options" for more information. If you want to change any of the values at a later time, you can access the Table Output Options window by pressing the [F10] key from the Output Format field.

The rest of the information on the User-defined Output Entry screen is relevant for both table and file output formats. In general, Oracle® tables are used to analyze large groups of donors, so you will most likely set the output type to Accounts. (Note that account-level outputs do not have access to transaction-level fields, but you can choose summary giving information for accounts from the Account Activities table.)

Working with Output Fields

You can enter one or more output fields for the user-defined output; these are fields from which TA should pull data for every record for the selected query with which the user-defined output is run. To enter these fields, access the Fields to Output window by clicking **<Fields>** on the User-defined Output Entry screen.

From the Field Name field on the Fields to Output window, you can press the [F9] key to view the output fields from which you can choose. This list of fields is tied to the output type you assigned to the user-defined output and can include database fields and calculated fields. For example, if you assign the Transactions output type to the user-defined output, the list of output fields includes the Payment Method database field. If you assign the Accounts output type to the user-defined output, the list of output fields does not include the Payment Method database field.

See Also:

$ K Outputting Address and Salutation Fields

The following table indicates how the fields on Address Entry and Salutation Entry screens map to the fields you can select for output on a User-defined output.

Entry Field	Output Field	Comments
Address Entry		
Address Lines	Address Line (for the 1st line) Address Last Line (for the 2nd line)	The first address line on Address Entry defaults from what is entered in the Street #, Street, and Apt # fields. The second address line on Address Entry defaults from what is entered in the City, State, ZIP and ZIP+4 fields. While the Address Lines default from the fields listed above, the user can customize them to be different than the default.

Outputting_Address_and_Salutation_Fields

$ Outputting Address and Salutation Fields

K Address and Salutation Fields to Output;Salutation and Address Fields to Output

Line 1	Address Extra Line 1	
Line 2	Address Extra Line 2	
Salutation Entry		
Individual Accounts Account Category = I		On a name-level salutation, only Outside 1 is likely to have a value.
Inside Outside 1 Outside 2 Outside 3	Inside Salutation Salutation 1 Salutation 2 Salutation 3	On the account-level salutation, Outside 1 and Outside 2 will have values if the account has two active, adult names in the salutation. Outside 1 is the first name's name line, and Outside 2 is the second name's name line.
Organization Accounts Account Category = C, F, G, O Inside Outside 1 Outside 2 Outside 3	Inside Salutation Salutation 1 Salutation 2 Salutation 3	For a contact at an organization account: Outside 1 is the person's name line; Outside 2 is the person's job title; and Outside 3 is the account name line (the organization name). The account-level salutation looks exactly the same as the primary contact's salutation. If there is no primary contact, then the account-level salutation has the value of your organization's "Non-individual Inside Salutation" system preference (e.g., Sir or Madam) for the Inside Salutation; nothing in Outside 1 or Outside 2; and the organization's name line in Outside 3.

Changing the Referenced Field: Giver, Recipient, and Acknowledged

For benefits and transactions user-defined outputs, you can change which field TA references, e.g., you want TA to pull the giver information instead of the recipient information, by highlighting the field and pressing the [Ctrl] [Alt] [F9] key combination. TA displays the Output Column Choices window from which you can select the related field.

For benefits user-defined outputs, the related fields are "GIVER" and "RECIPIENT."

For transactions user-defined outputs, the related fields are "GIVER" and "ACKNOWLEDGED."

Adding an Output Field at the End of the List of Output Fields

On the Fields to Output window, you can press the [Tab] key from the last output field in the list of output fields to move to the next blank line to enter the next output field. After you add the output field to the end of the list, you must test the user-defined output to activate it.

Adding an Output Field Within the List of Output Fields

You can add an output field in the proper position within the list of output the fields by completing the following steps from the Fields to Output window.

1. Highlight the field that should precede the field you want to add.

2. Press the [F6] key. TA creates a new line below the field you highlighted.

3. Select the additional field you want to output.

4. Click <Close> to return to the User-defined Output Entry screen.

5. Test the user-defined output to activate it.

Using the Reorder Feature to Add an Output Field Within the List of Output Fields

You can add an output field to the end of the list of output fields and use the Reorder feature to move the field to the proper position in the list of output fields by completing the following steps from the Fields to Output window.

1. Add the field to the bottom of the list of output fields.

2. Set the Sequence field to the sequence number that properly positions the output field you just added in the list of output fields.

3. Click <Reorder> to have TA redisplay the list of output fields based on each one's sequence number.

4. Click <Close> to return to the User-defined Output Entry screen.

5. Test the user-defined output to activate it.

Changing the Order of the Output Fields

To reorder the output fields, complete the following steps.

1. Access the User-defined Output Entry screen.

2. If you were not working with on this screen previously, TA displays a message from which you should click <Find> to find the user-defined output you want to update. If your current user-defined output, i.e., the last user-defined output with which you worked during your current session, appears, click <Find> on the TA toolbar to find the user-defined output you want to update. In both cases, the Find User-defined Outputs window appears.

3. Find the user-defined output you want to update. See "Finding a User-defined Output" to learn how to find a user-defined output.

4. Click <Fields> to access the Fields to Output window.

5. For each field that should be positioned differently in the output file (or output table), change the sequence number to one that is appropriate to the order you want. You cannot use any sequence number twice. If you try to assign a sequence number already used, TA displays in the status bar the error "Selection sequence number already exists;" you need to assign a different sequence number to that output field.

6. Click <Reorder>. TA redisplays the fields based on their sequence numbers.

7. Click <Close> to return to the User-defined Output Entry screen.

8. Test the user-defined output to activate it. See "Testing a User-defined Output" to learn how to test a user-defined output.

For example, assume you set up a user-defined output with only the gift type, pledge amount, and gift kind as the output fields in that order, and you didn't change the sequence number TA defaulted for each.

The Gift Type field is listed on the first line and assigned the sequence number 10.

The Pledge Amount field is listed on the second line and assigned the sequence number 20.

The Gift Kind field is listed on the third line and assigned the sequence number 30.

Assume you then realized that you want the gift kind to be between the gift type and the pledge amount. You could change the sequence number of the Gift Kind field from "30" to "15" and click <Reorder>. TA redisplays the fields based on their sequence numbers.

The Gift Type field is listed on the first line and assigned the sequence number 10.

The Gift Kind field is listed on the second line and assigned the sequence number 15.

The Pledge Amount field is listed on the third line and assigned the sequence number 20.

Changing the Column Header or Column Name for a Field

You can customize either the column header or the column name, depending on the output format.

Column Header for Fields in an Output File

For outputs using one of the file output formats, TA enables you to change the heading of the column that displays in your output file. For example, when you enter the field name "CURRENT MEMBER YEAR PAID AMOUNT," TA sets the column header to " CURRENT MEMBER YEAR PAID AMOUNT." You can change the column header to something like "CMY PAID AMOUNT" or another name you will recognize in your output file.

Column Names for an Output Table

For outputs using a table output format, TA enables you to change the column names in your table. Each column name must follow Oracle® rules for column names. These rules include the following:

Must begin with a letter

Cannot contain spaces

Can contain only alphanumeric characters and the special characters $, _, and #

Using the same example as above, when you enter the field name "CURRENT MEMBER YEAR PAID AMOUNT," TA sets the column header to " CURRENT_MEMBER_YEAR_PAID_AMOUNT." You can change the column header to something like "CMY_PAID_AMOUNT" or another name you will recognize in your output table.

Deleting an Output Field

If you want to delete an output field from a user-defined output, you can delete the field by completing the following steps from the Fields to Output window.

1.   Highlight the output field that you want to delete.

2.   Press the [Shift] [F6] key combination. TA deletes the field.

3.   Click <Close> to return to the User-defined Output Entry screen.

4.   Test the user-defined output to activate it.

Entering Additional Criteria for Selected Output Fields

Certain output fields, such as many of the account activity fields, require additional information (i.e., a specific code) in order for TA to properly write the data to the output file (or output table). You can enter the specific code that you want on the Criteria for Selection window.

Accessing the Criteria for Selection Field Window

For the Field Name field for the output field that requires additional criteria, you can press the [F10] key to access the Criteria for Selection Field window.

Setting the Additional Criteria

If you need to set additional criteria for an output field, enter the criteria in the Other Criteria field. For many of the fields which need additional criteria, such as most of the account activity fields, TA is programmed to default into the Other Criteria field part of the appropriate SQL statement; you only need to complete the statement by typing in the value to select the correct record.

For example, suppose you selected the Giving Level field from the Account Activities table, and the Alias field indicates that the alias for the Account Activities table is T1. TA will default the following partial SQL statement into the Other Criteria field.

```
T1.ACTIVITY_TYPE(+) =
```

To complete this line, you would need to enter the appropriate activity type code, enclosed in single quotes. You must follow SQL conventions very carefully because you are adding to the SQL statement for the user-defined output. Character data must be enclosed in single-quotes, and all codes must be in capital letters. Also, you should be careful not to enter additional spaces, tabs, carriage-returns, or other characters, because they will affect how the SQL statement runs.

Note: When you complete entry of the criteria in the Other Criteria field, do not exit the window by pressing the [Enter] key. This action adds a carriage-return to the criteria. Instead, press the [Exit] key or click <Close>.

To complete the statement in the example, you would set the Other Criteria field to:

```
T1.ACTIVITY_TYPE(+) = 'A'
```

if you want the donor's Annual giving level (assuming "A" refers to the Annual activity type).

Additional Output Processing Options

Once you are working with a user-defined output, you can choose additional processing options including the following:

setting the Private field, and

adding or removing a linked output to it.

Setting the Private Field

When you create a user-defined output, TA defaults the Private field to "Y" for yes. You can indicate the user-defined output should be a public user-defined output by setting this field to "N" for no.

Adding a Linked Output to a User-defined Output

To link another user-defined output, a report, or an update procedure to the user-defined output with which you are working, complete the following steps.

1.   Click <Linked Outputs> on the User-defined Output Entry screen to access the Outputs to be Scheduled with this User-defined Output window.

2.   Enter the name of the output in the Linked Output Name field. You can press the [F9] key to see the list of user-defined outputs, update procedures, and reports that you can link to the current user-defined output.

3.   Enter the status of the linked output in the Status field. TA defaults the status to "A" for active. You can also set the status to "I for inactive.

4. Click <Close> to return to the User-defined Output Entry screen.

Once you add the first linked output, you can add the next one from the Outputs to be Scheduled with this User-defined Output window by pressing the [F6] key. A blank line appears below the linked output you just entered. You can then complete steps 2 and 3 above to add the next linked output.

Removing a Linked Output from the List of Linked Outputs

To remove a linked output from the list of linked outputs, complete the following steps.

1. Click <Linked Outputs> on the User-defined Output Entry screen to access the Outputs to be Scheduled with this User-defined Output window.

2. Highlight the linked output you want to remove from the list of linked outputs.

3. Press the [Shift] [F6] key combination. TA deletes the linked output from the list.

4. Click <Close> to return to the User-defined Output Entry screen.

Testing a User-defined Output

You can test the user-defined output by clicking <Test Output> on the User-defined Output Entry screen. TA generates the SQL statement for the user-defined output and checks to see that it is valid. When TA is finished compiling the statement for the user-defined output, TA displays the appropriate message to indicate whether the user-defined output ran successfully. If the user-defined output ran successfully, TA activates the user-defined output. The user-defined output can now be scheduled.

If TA cannot generate a valid SQL statement, TA sets the user-defined output's status to "E" for Errors.

Note: When you press the <Test> button, TA searches to see of the queried records for that query are locked by another process (i.e., another process is using that query). If the queried records are locked, TA displays the message "Query has been locked by another process." Annd you will not be able to test the query at that time. If the queried records are not locked, TA locks the query until the test is completed and then releases the lock when the test is completed.

See the Scheduling Queries and Viewing Records Retrieved chapter to learn how to schedule a user-defined output to run with a query.

See Also:
Viewing or Editing the SQL Statement

Viewing or Editing the SQL Statement

Viewing the SQL Statement

You can view the SQL statement that TA generated after you test a user-defined output by clicking <View SQL>. TA displays the SQL Statement window. Since you can create lengthy user-defined outputs, you can click the <Part 1>, <Part 2>, <Part 3>, <Part 4>,<Part 5>, and <Part 6> buttons to view different parts of the statement. You can close this window by clicking <Close>.

Editing the SQL Statement

You can edit the SQL statement TA generates for the user-defined output. To edit the statement, click <View SQL> to access the SQL Statement window. You can click the <Part 1>, <Part 2>, <Part 3>, <Part 4>,<Part 5>, and <Part 6> buttons to move to different parts of the statement you want to edit. Edit the statement using standard SQL conventions. You can close this window by clicking <Close>.

If you edit the statement, TA automatically saves the changes you made to the SQL statement when you exit the user-defined output. If you want to keep the changes you made by editing the statement, you **must not test** the user-defined output again or your changes will be lost. Any changes you make must follow the rules of the SQL language or the user-defined output will run with errors when it is scheduled with a query. **For this reason, you should be very careful before making any changes to the SQL statement.**

Finding a User-defined Output

You can find a set of user-defined outputs by setting one or more of the following fields on the Find User-defined Outputs window: User-defined Output, Output Type, Owner, and User Group. If you set two or more of these fields and click <Find>, TA finds the user-defined outputs which meet the criteria you entered in both fields on the Find User-defined Outputs window. You can move from one user-defined output to the next by clicking <Prev> or <Next> on the TA toolbar as appropriate.

To find an existing user-defined output, complete the following steps.

1. Access the User-defined Output Entry screen.

2. If you were not working with this screen previously, TA displays a message from which you should click <Find> to find a user-defined output. If your current user-defined output, i.e., the last user-defined output with which you worked during your current session, appears, click <Find> on the TA toolbar to find a different user-defined output. In both cases, the Find User-defined Outputs window appears.

3. Enter the name of the user-defined output in the User-defined Output field. You can press the [F9] key to view the list of user-defined outputs that you can view. This list excludes the private user-defined outputs of other users.

4. Enter the output type in the Output Type field. You can press the [F9] key to view the list of output types.

5. Enter the name of the user who created the user-defined output in the Owner field. You can press the [F9] key to view the list of users.

6. Enter the user group that owns the user-defined output in the User Group field. You can press the [F9] key to view the list of user groups to which you belong.

7. Click <Find>. TA displays the user-defined output on the User-defined Output Entry screen.

You can use the wildcard percent ("%") in the output name to find a set of outputs. The percent sign represents all numbers or characters following those specified. For example, you can enter "TA ACK%" to find all of the standard TA acknowledgment user-defined outputs or enter "TA%BILL" to find the standard TA bill user-defined outputs such as the pledge bill user-defined output and the installment bill user-defined output.

When you search by output type only, the user-defined outputs selected do not include other user's private user-defined outputs of the type you selected.

When you search by Owner Name only, the user-defined outputs include only the user's public user-defined outputs unless you entered your user name or you and the user are members of the same user group. If you entered your user name, the records include all of your user-defined outputs. See "Output Privileges."

Working with User Groups (Outputs)

A user group can be assigned to a user-defined output to allow multiple users to "own" the user-defined output. You can work with a user group on the User Group Entry screen.

Creating a User Group

1. Access the User Group Entry screen. TA displays the Find User Groups window.

2. Click <New> to access the Create New User Group window. You can enter a name up to 12 characters in length including spaces, underscores, and periods. This name must be unique.

3. Click <Create>. TA displays the user group on the User Group Entry screen.

4. Enter a description of the user group in the Description field.

5. Assign members to the user group.

Assigning Members to a User Group

Once a user group has been created, you can assign members to it.

1. In the User Assignments block, click on the first blank line.

   Note: If no blank lines appear, highlight any user name in the User Assignments block and press the [F6] key or click the <New> button on the toolbar to add a blank line.

2. Enter the brief name of the user to assign to the group. You can press the [F9] key to select from the list of user names.

3. Press the [Tab] key. TA displays the user's name line to the right of the user's brief name.

4. Repeat steps 1 through 3 for each additional user that you want to assign to the group.

   Note: You can remove a user from a user group by highlighting the brief name in the User Assignments block and pressing the [Shift] [F6] key combination.

See Also:

Finding a User Group (Outputs)

1. Access the User Group Entry screen. TA displays the Find User Groups window.

2. Enter the name of the user group in the User Group field. You can press the [F9] key to select from the list of user groups.

   Note: You can use the percent sign ("%") as a wildcard character in the User Group field to find a set of user groups. The percent sign represents all characters following those you enter for the user group name.

3. Click <Find>.

Deleting a User-defined Output

You can mark a user-defined output for deletion if that user-defined output should no longer be used. If you mark a user-defined output for deletion and then decide that the user-defined output should not be deleted, you can "unmark" the user-defined output so that delete processing does not delete it.

A user-defined output marked for deletion is not deleted until your organization runs delete processing.

Before you mark a user-defined output for deletion: check to see if the user-defined output is linked to any other user-defined outputs. If you mark the user-defined output for deletion, it will not run when a user-defined output to which it is linked is scheduled to run.

If you want to mark a user-defined output for deletion, complete the following steps.

1. Access the User-defined Output Entry screen.

2. If you were not working with this screen previously, TA displays a message from which you should click <Find> to find the user-defined output you want to delete. If your current user-defined output, i.e., the last user-defined output with which you worked during your current session, appears, click <Find> on the TA toolbar to find the user-defined output you want to delete. In both cases, the Find User-defined Outputs window appears.

3. Find the user-defined output you want to delete. See "Finding a User-defined Output" to learn how to search for an existing user-defined output.

4. Click <Delete> on the TA toolbar. TA sets the user-defined output's status to "D" for delete. When your organization runs delete processing, this user-defined output will be deleted.

Note: When you mark a user-defined output for deletion, the <Delete> button on the toolbar changes to the <Undelete> button. To unmark a user-defined output that is marked for deletion, in step 4 above, click the <Undelete> button.

Errors with User-defined Outputs

If a user-defined output's status is set to "E" for in error, complete the following steps to determine the cause of the error.

1. Review the errors for your user-defined output on the Submitted Requests window. See "Viewing and Clearing Errors Associated with an Operation" for more information.

2. Verify that any changes you might have made to fields on the Criteria for Selection Field window still construct valid SQL expressions. Changes may have been made to these fields when the output was created and a field that was selected on the Fields to Output window required an additional value. To verify the changes, access the User-defined Output Entry screen, click <Fields>, and press [F10] from the values in the Field Name field on the Fields to Output window. Once you access the Criteria for Field Selection window, review the Other Criteria field to complete any expressions that require a value. For example, the following expression requires that you enter a valid activity type

      T2.ACTIVITY_TYPE(+) =

or you will get an error when testing the user-defined output. In addition, the Join Conditions field must be filled unless the alias is TØ.

3. Find out from your Database Administrator or Systems Administrator if any problems exist with the database or your local network. If TA displayed a specific error message, note down that message and the steps you took until the message appeared.

4. Contact TA Support. Make sure to include the name of the user-defined output and any special modifications you might have made to the user-defined output. If TA displayed a specific error message, include that message and the steps you took until the message appeared.

Accessing the Query Entry and Query and Output Schedule Screens

From the User-defined Output Entry screen, you have direct access to the following screens.

The Query Entry screen by clicking < Queries>

The Query and Output Schedule screen by clicking <Schedule>

You use the Query Entry screen to create a query that you want to schedule to run with the user-defined output. See the Understanding Queries chapter for an explanation of what a query is and how to use the Query Entry screen.

You use the Query and Output Schedule screen to set up the schedule of which queries should be run with which outputs. See the Scheduling Queries and Viewing Records Retrieved chapter for an explanation of the Query and Output Schedule screen.