

Early Warning System: Overview



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Icons

| Icon | Meaning |
|---|----------------|
|  | Caution |
|  | Example |
|  | Note |
|  | Recommendation |
|  | Syntax |

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Early Warning System: Overview

This section describes the Early Warning System.

The Early Warning System enables you to make decision-oriented selections and to check weak areas within Logistics.

The Early Warning System allows you to search for exceptional situations and aids in early detection of undesirable situations.



Since the Early Warning System is integrated with all of the information systems, the documentation will have examples from all areas. These examples can easily be applied to other application areas of Logistics.

[Early Warning System: Basics \[Page 6\]](#)

[Creating an Exception \[Page 10\]](#)

[Changing an Exception \[Page 21\]](#)

[Displaying an Exception \[Page 24\]](#)

[Creating an Exception Group \[Page 35\]](#)

[Changing an Exception Group \[Page 36\]](#)

[Displaying an Exception Group \[Page 37\]](#)

[Periodic Analyses \[Page 47\]](#)

[Exception Analysis \[Page 56\]](#)

Early Warning System: Basics

The Early Warning System is based on the key figures of the Logistics Information System (LIS) and can be used for all of the applications in Logistics.

You can find the Early Warning System in all of the LIS information system menus.

The Early Warning System allows you to make decision-oriented selections and to check weak areas in Logistics, by enabling you to search for exceptional situations. This means that you can detect and rectify potential problems at an early stage.

You can define both [Exceptions \[Ext.\]](#) and the conditions for follow-up processing.

An exception consists of specified characteristics or characteristic values (for example customer, material), and requirements. The following requirements can be defined:

- **Threshold Value**

For example, materials/customers whose sales are greater than 10,000 DM)

- **Trend**

For example, materials/customers with a negative trend in sales or lead times)

- **Planned/Actual Comparison**

For example, which customers have a plan realization for incoming orders of less than 80%)

In the planned/actual comparison, you specify the plan realization in percent and specify an operator (>, <, = etc.). This type of requirement helps you to check the plan realization and to pinpoint the weak areas between planned and actual data.

You can also carry out a **forecast** in the threshold value analysis and planned/actual comparison. The number of periods to be forecasted are determined by you. The forecast is carried out based on historical data.

When using the threshold value analysis you can determine, with the help of the forecast, whether or not a preset threshold value is also possible in the future based on the present actual data thereby enabling you to react in time to undesirable situations.

With the help of the forecast in the planned/actual comparison you can compare planned figures with forecasted data, which result due to past developments. This allows you then to react quickly to threatening situations in the future.

Another advantage to checking for trends is that developments can be recognized early, leaving enough time for a reaction.

An exception can have a variety of forms, for example, you can store requirements for various characteristic values and different key figures or you can combine a trend and threshold value analysis.

By combining exceptions into **exception groups** you can make a check on complex data.

There are three possible ways to check for exceptional situations:

- Standard analysis
- Exception analysis
- Periodic analysis

Displaying Exceptional Situations in the Standard Analyses

You can specify an exception when carrying out a standard analysis. In standard analyses the exceptional situations are highlighted using color codes. Differentiation is possible in that different colors can denote different conditions. For example, you can choose red for an inventory turnover less than three, yellow for an inventory turnover greater than two and green for an inventory turnover greater than five.

These color codes allow you to navigate selectively within the standard analyses. If exceptions occur, on the material level, for example, this will be displayed on a higher aggregation level (for example, on the purchasing organization or customer level). With the help of the drill-down function, you can then go to the line with the corresponding color code for the exceptional situation.

Exception Analysis

You can carry out what is known as an exception analysis. The difference between this and the display of exceptions in standard analyses is that only data to which the exception applies is displayed here. The exception analysis is like a filter; only exceptional situations are displayed. Exceptional situations here are also highlighted in different colors.

Periodic Analysis

Periodic analyses release you from the burden of searching for exceptional situations. The existing dataset is searched systematically for exceptional situations. The frequency of the search is freely definable (hourly, daily, weekly, monthly). If an exceptional situation arises, you can be informed by mail or via workflow and initialize follow-up processing.

A periodic analysis can be carried out in two ways:

- As an event-driven analysis

The search for exceptional situations is initialized when a change in data occurs due to a logistics event (for example, sales order, purchase order, stock movement).

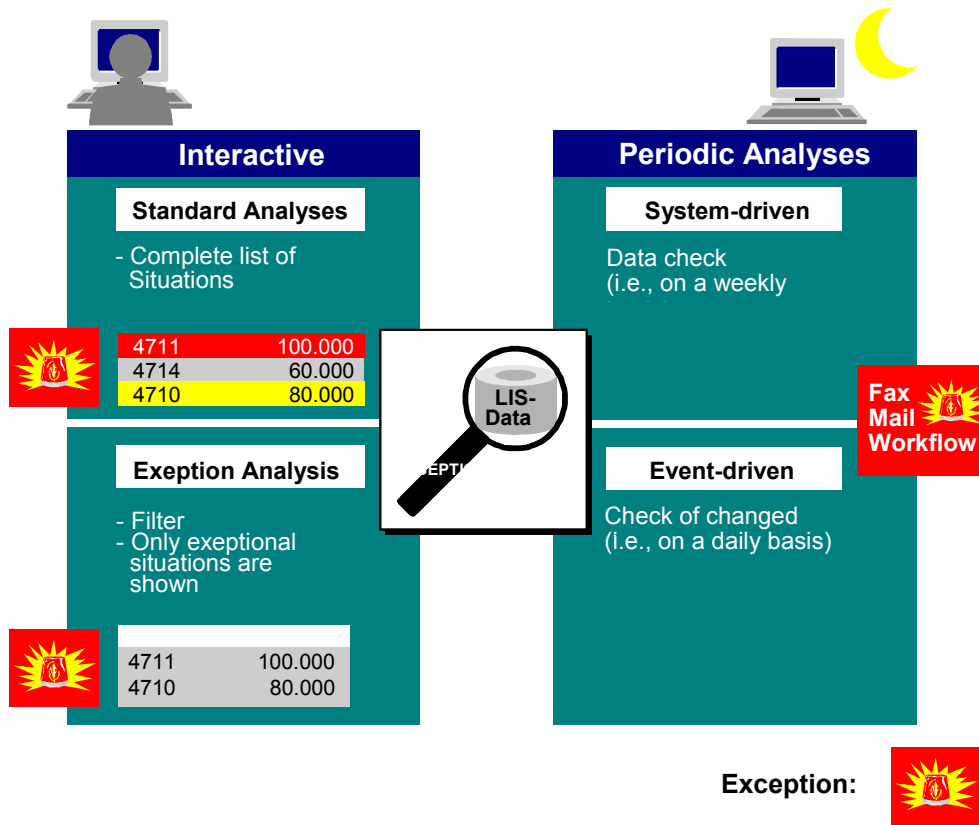
- As a system-driven analysis

The dataset chosen is checked for exceptional situations.

We recommend that you monitor particularly important key figures or characteristics using event-driven periodic analysis. For all other cases, a weekly check, for example, can be carried out with the system-driven periodic analysis.

The following representation shows you an overview of the capabilities of the Early Warning System.

Early Warning System: Basics



Exceptions

[Creating an Exception \[Page 10\]](#)

[Changing an Exception \[Page 21\]](#)

[Displaying an Exception \[Page 24\]](#)

Creating an Exception

Creating an Exception

Creating an exception includes the following steps:

A. Information Structure, Specify the Name and Description of the Exception

B. Selecting Characteristics

Values to the characteristics can be stored. If, for example, “Southern purchasing organization” is used, then only the purchasing organization south will be checked for the exceptional situation, but, in contrast, if the plant 0001 is specified then all purchasing organizations that belong to plant 0001 will be checked.

C. Selecting Key Figures and Defining Requirements

Requirements can be defined as a threshold value, trend or can be defined for a planned/actual comparison for a key figure of your choice. The exchange rate type, currency, number of periods and the type of requirement link (and/or) are also determined.

D. Determining the Conditions for Follow-Up Processing

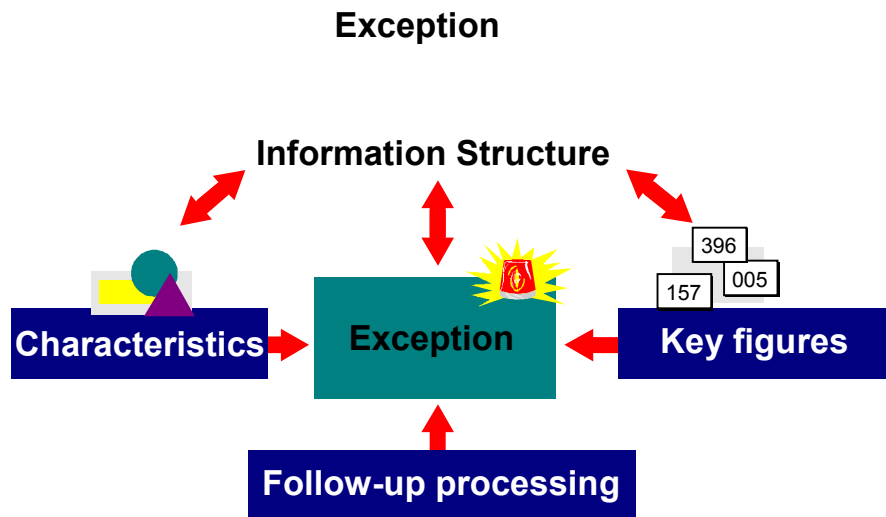
Various attributes can be maintained for the follow-up processing of the exception. Here you can determine the color in which the exception should appear in the standard or exception analysis.

On the one hand, you can activate the exception for the standard analysis, that is, you can display the exception in the standard analyses or carry out an exception analysis. On the other hand, you can activate the exception for a periodic analysis and determine how someone will be notified (mail, fax, or workflow) about the exceptional situation.



You can find further information about using Workflow in the Early Warning System in the documentation on *SAP Business Workflow* in the section *Workflow Scenarios in Applications* under *Logistics Information System: Trigger Workflow from an Exception in the Early Warning System (LO-LIS)*.

The following illustration shows you an overview of these steps.



The following topics explain the exact procedure for carrying out these steps:

[Access: Specifying the Information Structure, Name and Description of the Exception \[Page 12\]](#)

[Selecting Characteristics and Storing Characteristic Values \[Page 13\]](#)

[Requirements \[Page 15\]](#)

[Determining Follow-Up Processing \[Page 18\]](#)

Access: Specifying the Information Structure, Name and Description of the Exception

Access: Specifying the Information Structure, Name and Description of the Exception

1. From the menu of the information system, select *Early Warning System* → *Exception* → *Create*.
The initial screen will appear.
2. In the *Info structure* field, specify the name of the information structure to which the exception should refer.



With the information structure you determine the selection of the characteristics and key figures for which the exceptional situations can be defined.

3. In the *Exception* field, specify the name of the exception and in the following field a description of the exception.
4. You can use an already existing exception as a reference. You thus copy the characteristics, requirements and the settings for the follow-up processing from the reference exception. If you want to use an already existing exception as a reference, specify under reference the name of the exception in the *Exception* field.

From the initial screen you can now carry out the following activities:

- **Selecting Characteristics and Storing Characteristic Values**

This procedure can be found in [Selecting Characteristics and Storing Characteristic Values \[Page 13\]](#).

- **Determining Requirements**

This procedure can be found in [Requirements \[Page 15\]](#).

- **Determining Follow-Up Processing**

You can read about how to determine the conditions for the follow-up processing in [Determining Follow-Up Processing \[Page 18\]](#).

Selecting Characteristics and Storing Characteristic Values

[Kennzahlen auswählen \[Ext.\]](#)

Selecting Characteristics

1. Select *Goto* → *Select characteristics*.
You will see a dialog box with the selection list of characteristics. The characteristics of the specified information structure are displayed for selection.
2. In order to copy a characteristic from the selection list, select the desired characteristic in the list and use the function *Copy*

The selected characteristic is then marked (*) and is copied into the list of the selected characteristics.

In order to select a block of characteristics for copying purposes, position the cursor at the beginning of the block and select the function *Select block*. Position the cursor at the end of the block that you want to copy and again select the function *Select block*. In order to copy the selected characteristics in the list of the selected fields, select the function *Copy*.
3. In order to arrive at the list of selected characteristics, press `Enter`.

The list of selected characteristics can now be edited, that is, you can now change the sequence of the characteristics, delete characteristics from the list and insert new characteristics from the selection list.

 - **Deleting Characteristics**
In order to delete a characteristic from the list, position the cursor on the field in the list and select the function *Delete*.
 - **Changing the Sequence of the Characteristics**
In order to change the sequence of the characteristics in the list, position the cursor on the characteristic in the list and use the function *Select*. Position the cursor on the desired place in the list. To move the selected characteristic, select the function *Move*. The marked characteristic is always placed *over* the characteristic on which the cursor is located.
 - **Adding New Characteristics**
The function *Selection list* provides you with a selection list of characteristics. The characteristics that were already selected are indicated with “*”.
If you want to include a new characteristic in the list, select the desired characteristic and select the function *Copy*. The characteristic is then copied into the selection list.
By pressing `Enter` you will return to the list of selected characteristics.
4. Use the *Copy* function to return to the initial screen.
The list of selected characteristics appears on the left half of the screen.
5. In order to store values for a characteristic, position the cursor on the desired characteristic and select *Edit* → *Values for characteristic*.
A dialog box appears, in which you can specify characteristic values. To copy the characteristic values, select the function *Copy*. The characteristics which have been given values are marked.

Selecting Characteristics and Storing Characteristic Values

Copying Characteristics

You can copy the characteristics and characteristic values from an already existing exception. The prerequisite is that both exceptions refer to the same information structure.

Proceed as follows:

1. Select *Edit* → *Copy characteristics*.
A dialog box will appear in which you can specify a reference exception.
2. Specify the exception in the field *Exception* whose characteristic values you want to copy and press *Enter*.
The characteristics and characteristic values of the reference exception are copied onto the screen for the characteristics.

Storing Characteristic Values

1. Position the cursor on the characteristic for which you want to store values and select *Edit* → *Values for characteristic* (or double click on the characteristic).
A dialog box appears.

2. Specify the desired characteristic values.

Caution: If, for example, the value “Southern purchasing organization” is stored, then only the southern purchasing organization will be checked for the exceptional situation, if, however, the plant 0001 is specified, then all purchasing organizations that belong to plant 0001 will be checked.



By using the customer exit EXIT_SAPMMCY1_001 (enhancement MCYA0001) you can store characteristic values for characteristics that can then be read in. In the dialog box the function fill in information will appear. If you execute this function the stored characteristic values for the characteristics will be copied into the dialog box. Already given entries for the characteristic values will be overwritten in this case.

3. In order to copy the characteristic values, select the function *Copy*. You will then return to the characteristics screen and the characteristic will be marked.



Save your entries with *Exception* → *Save*.

[Requirements \[Page 15\]](#)

Requirements

To determine requirements, select *Goto* → *Requirements*.

Parameters for the Requirements

Define the following parameters:

- **Currency and Exchange Rate Type**

In the analysis currency group in the field *Currency*, specify the currency key and in the field *Currency exchange rate* specify the key for the currency exchange rate.

- **Periods**

In the period to analyze group in the field *No. of per.*, specify the number of historical periods that should be taken into consideration during a check.

If you want to include the current period in your check, select *Current period*.

If you specify three periods, for example, then the values of three periods will be totaled and it will be for this value that the requirement will be checked. during a planned/actual comparison and during the threshold value analysis.



The number of periods that is shown here can be found in the exception analysis as the default value for the period to analyze. Note that if the default value is overwritten during the exception analysis it will probably lead to incorrect interpretations. For example, if the exceptional situation that is defined in the exception is based on data for the number of periods that has been determined here. Thus, an analysis with a threshold value of 10,000 and 2 periods will have other results than if the number of periods used was 5.

When performing a **forecast**, please note the following:

You can perform a forecast during the threshold value analysis and the planned/actual comparison in the definition of an individual exception, so that it is possible to check a period of time in the future on the requirement. When you execute the forecast then the defined number of periods will serve as the basis of the forecast. For this reason, you should choose a sufficient number of periods when executing a forecast so that the results of the forecast are more dependable. If you specify more than 4 periods, the system will carry out a statistical test. If you specify 4 or less than 4 periods then an average formation is performed.

In the threshold value analysis and planned/actual comparison, you can carry out a check of the individual periods for every requirement if the field *Check individual periods* has been selected in the definition of the requirement.

- **Type of Requirement Link**

In the link group, select the type of link (and/or) for the requirement.

In the and-link only those characteristics or characteristic values are given which apply to all of the requirements (average quantity). In the or-link the characteristics or the characteristic values are given which apply to at least one requirement (combined quantity).

Requirements

Selecting Key Figures

Select *Edit* → *Select key figures*.

A dialog box appears with the selection list of key figures. Key figures from the specified information structure are displayed. You can now proceed as already described in the section “Selecting characteristics” (see [Selecting Characteristics and Storing Characteristic Values \[Page 13\]](#)).

Here, you can also select the characteristic *Period*. If the period was specified in the exception as the first characteristic a list with the periods will be displayed, for example, in the exception analysis as the initial list. With one quick look, you can determine in which periods the exception situation, which is defined in the exception, has occurred.

Copying Key Figures

You can copy the key figures and key figure values from an already existing exception. The prerequisite is that both of the exceptions refer to the same information structure.

Proceed as follows:

1. Select *Edit* → *Copy key figures*.
A dialog box appears where you can specify a reference exception.
2. Specify in the field *Exception* the exception whose requirements you would like to copy and press *Enter*.
The characteristics and characteristic values of the reference exception are copied onto the characteristics maintenance screen.

Duplicating a Key Figure

If you want to store another requirement for an already selected key figure, you can easily duplicate this.

Position the cursor on the desired key figure and select *Edit* → *Duplicate key figure*.

[Defining/Changing Requirements \[Page 17\]](#)

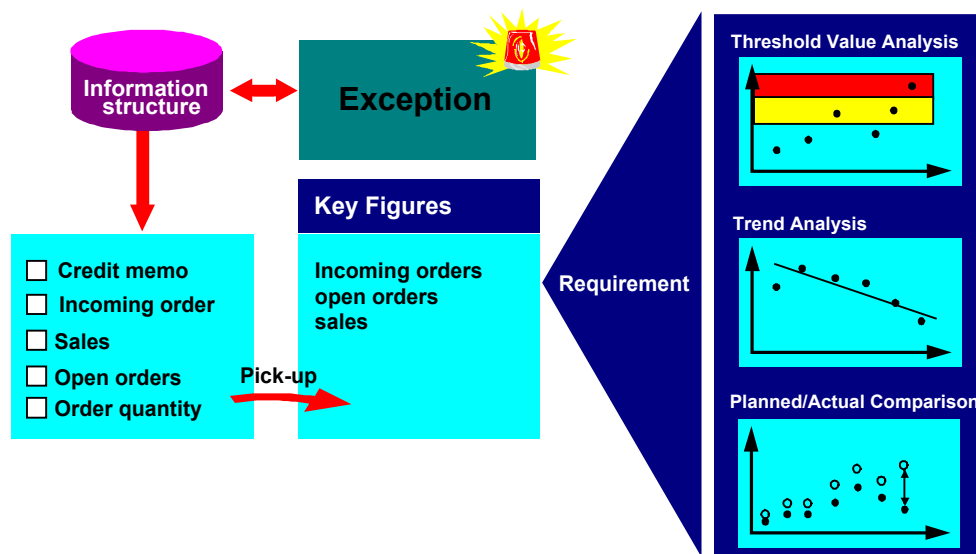
[Determining Follow-Up Processing \[Page 18\]](#)

Defining/Changing Requirements

You can define or change the following three types of requirements:

- Threshold value analysis
- Trend analysis
- Planned/Actual comparison

Exception: Selection Key Figures and Defining Requirements



[Threshold Value Analysis \[Page 25\]](#)

[Trend Analysis \[Page 29\]](#)

[Planned/Actual Comparison \[Page 31\]](#)

Determining Follow-Up Processing

Determining Follow-Up Processing

You determine the conditions or attributes for producing the exception in the follow-up processing.

In order to get to follow-up processing, select *Goto* → *Follow-up processing*.

You can combine the following conditions for the exception:

Standard Analyses

You can display the exceptional situations within the framework of a standard analysis or exception analysis.

When carrying out a standard analysis you can specify an exception (see [Performing Standard Analyses \[Ext.\]](#)). The prerequisite here is that the standard analysis and the exception are based on the same information structure. The exceptional situations can be highlighted in different colors in the standard analyses. This makes it possible to selectively navigate through the standard analysis, since exceptional situations are already shown on a higher aggregation level (for example, exceptional situation on a material level is already shown on a plant level).

The exception analysis ([Exception Analysis \[Page 56\]](#)) is basically a standard analysis, that is, you can also carry out all of the standard analysis functions here. The major difference between displaying the exceptional situations in the other standard analyses is, however, that the exception analysis acts like a filter. Only data that refers to the exception is shown. Even in the case of the exception analysis, the exceptional situations are highlighted in different colors.

Proceed as follows:

1. To activate the exception for the standard or exception analysis, select the field *Active for standard analysis*.
2. You can determine a color for each exception in which the exceptional situations that are defined in the exception are shown. If you want to separate exceptional situations from one another by color, then you must create other exceptions and then combine them into an exception group (read [Creating an Exception Group \[Page 35\]](#)).

To determine the color coding of the exception for the list, select the color key in which the exceptional situation should be displayed from the *Color in list* field. The following possibilities are available:

| Color | Key |
|-------|----------|
| 0 | no color |
| 1 | green |
| 2 | yellow |
| 3 | red |



When performing an exception analysis it is more logical with individual exceptions not to use a color to indicate the exceptional situations. Since it is *only* the exceptional situation that is shown, the complete list will appear in the color that you select.

On the other hand, if in the standard analyses an individual exception has been indicated without a color, then the exceptional situations will naturally not be visible.

Periodic Analyses

With the periodic analyses, you will be notified by the system about the exception-defined exceptional situations. The existing dataset is systematically checked for exceptional situations at a frequency that is chosen by you (hourly, weekly, monthly). If an exceptional situation should occur, either you or another recipient will be notified via mail or fax or you can initiate a workflow transfer that will eventually trigger a follow-up processing procedure.

There are two ways that a periodic analysis can be performed: event-driven or system-driven. In the event-driven periodic analysis the search for exceptional situations can only occur if there is a change in the data due to on an event (purchase order, stock movement, order) in comparison to the last analysis. In the system-driven periodic analysis the entire selected dataset is checked for exceptional situations.

Proceed as follows:

1. To activate the exception for a periodic analysis, select the field *Active for periodic analysis*.



If a periodic analysis was already created for an exception, this field cannot be changed in the change mode. If the exception is no longer active for the periodic analyses, then you must first delete the periodic analysis for the exception.

2. Determine the conditions for the type of information transfer in the event of an exceptional situation.
 - If you want to transfer to workflow, select the field *Transfer to workflow*.



You can find further information about using Workflow in the Early Warning System in the documentation on *SAP Business Workflow* in the section *Workflow Scenarios in Applications* under *Logistics Information System: Trigger Workflow from an Exception in the Early Warning System (LO-LIS)*.

- If you want to send info by mail, select the field *Send mail* and specify the name of the recipient in the subsequent field.



By using the function *Process* you can branch from mail into the assigned exception analysis and display the exception situation. Those selection criteria that were specified in the periodic analysis were taken into account (analysis currency, characteristic values).

- If you want to send a fax, select the field *Fax*. Specify the country code and the fax or telephone number in the subsequent fields. If you want a specific formula for the page layout, specify the name of the layout in the field, *Layout set*.
By using **Customer-Exit EXIT_SAPLMCY2_002** (enhancement MYCA0002) you can store texts for the variables in the fax layouts, which can then be read in.
- Information about an exception situation can be sent not only to one recipient, but to many people that belong to a general distribution list. Items that might be included in a distribution list are fax numbers, telex numbers or Internet addresses.
In order to notify members of a distribution list about an exception situation, select

Determining Follow-Up Processing

the field *Copy to distribution list* and specify the name of the distribution list in the field *Distribution list name*.

To display the list of distribution list members, position the cursor on the name of the distribution list in the field *Distribution list name* and select the function *Select*.

If you want to know what kind of distribution lists are available, specify in the field *Distribution list name* "*" and press Enter. A dialog box appears with a general listing of all of the existing distribution lists.



In the *Usage* field you can indicate whether the periodic analysis is system-driven, event-driven or if it has not yet been created. Consequently, when data is initially created "none" will always be displayed.



Select *Exception* → *Save* to save your entries.

Changing an Exception

If you want to change the exceptional situation that is defined in an exception, proceed as follows:

1. From the information system menu, select *Exception* → *Change*.
The initial screen appears.
2. In the field *Exception* specify the name of the exception that you want to change and press `Enter`.
The characteristics screen appears.

From this screen you can carry out the following changes:

– **Deleting an Exception**

To delete an exception, select *Exception* → *Delete*.



You can only delete an exception if this exception is not allocated to any exception group (see [Creating an Exception Group \[Page 35\]](#)). If you still want to delete an exception which is allocated to one or more exception groups, you must first delete the allocation in the exception group.

– **Changing Characteristics and Characteristic Values**

You can read about how to change characteristics or characteristic values in [Changing Characteristics and Characteristic Values \[Page 22\]](#).

– **Changing Requirements**

You can read about how to change requirements in [Requirements \[Ext.\]](#).

– **Changing Follow-Up Processing**

You can read about how to change the conditions for follow-up processing in [Determining Follow-Up Processing \[Page 18\]](#).

Changing Characteristics and Characteristic Values

Changing Characteristics and Characteristic Values

[Kennzahlen auswählen \[Ext.\]](#)

[Bedingungen \[Page 15\]](#)

Changing Characteristics

Select *Edit* → *Select characteristics*. A dialog box appears with the list of the selected characteristics. This list can now be processed.

- Deleting characteristics

To delete a characteristic from the list, position the cursor on the characteristic in the list and select the function *Delete*.
- Changing the sequence of characteristics in the list

To change the sequence of the characteristics in the list, position the cursor on the field in the list and choose the function *Select*. Position the cursor on the desired point in the list. To move the selected field, select the function *Move*. The selected characteristic will always be *behind* the characteristic where the cursor is.
- Inserting new characteristics

The function *Selection list* gives you a list with all of the characteristics of the information structure that provide the basis for the exception. The already selected characteristics are indicated with "***".

If you want to include a new characteristic in the list, select the desired characteristic and choose the function *Copy*. The characteristic will be copied into the selection list.

By pressing `Enter` you will return to the selected characteristics.

To return to the characteristics screen, press `Enter` again.

Copying Characteristics

You can copy characteristics and characteristic values from an already existing exception. The prerequisite is that both exceptions must refer to the same information structure.

Proceed as follows:

1. Select *Edit* → *Copy characteristics*.

A dialog box appears where you can specify a reference exception.
2. In the field *Exception*, specify the exception whose characteristics and characteristic values you would like to copy and press `Enter`.

The characteristics and characteristic values will then be copied from the reference exception into the maintenance screen for the characteristics.

Changing Characteristic Values

1. Position the cursor on the characteristic for which you want to store or change values and select *Edit* → *Values of characteristics*.

A dialog box appears.
2. Specify the desired characteristic values or carry out the desired changes.

Changing Characteristics and Characteristic Values

Please note the following: If, for example, “Southern purchasing organization” is used, then only the southern purchasing organization will be checked for the exceptional situation, in contrast, if the plant 0001 is specified then all purchasing organizations that belong to plant 0001 will be checked.

3. To copy the changes, select the function *Copy*. You will now return to the characteristics screen and if characteristic values were stored for a characteristic, then the characteristic will be marked.



Save the entries that you have made with *Exception* → *Save*.

Requirements

Displaying an Exception

Displaying an Exception

If you want to display the exceptional situation that is defined in an exception, proceed as follows:

1. From the information system menu, select *Exception* → *Display*.
The initial screen appears.
2. In the field *Exception* specify the name of the exception which you want to display and press `Enter`.
The characteristics screen appears.
3. By using *Goto* → *Requirements*, you can branch into the requirements.
4. By using *Goto* → *Follow-up processing*, you can display the conditions for the follow-up processing.

Threshold Value Analysis

When using the threshold value analysis, specify a threshold value for a key figure and an operator for the threshold value.

You can perform a forecast where you can determine whether a specified threshold value will also be achieved in the future based on the present actual data, leaving sufficient time for you to react to undesirable events.

The number of periods that are to be forecasted are defined by you. The forecast is carried out based on historical data.

For every requirement, you can specify whether a check should be done for the individual periods. If this option is selected, every period will be individually checked with regard to the requirement.



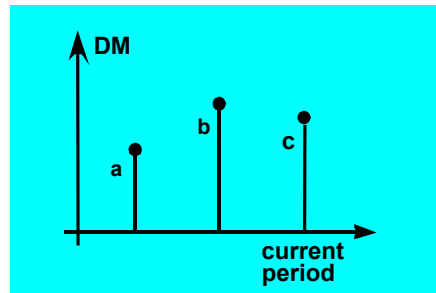
Note that in a forecast, the number of periods that you specify under the period to analyze is the one to be used for the forecast. If you have selected two periods, for example, as the period to be analyzed for the exception, this indicates that these two periods will be the basis for the forecast. You also need to specify the number of forecasting periods (*No. of forecast periods*). This is the number of periods for which a forecast, based on the actual data, will be done. If you specify five, for example, this indicates that based on two periods in the past, a forecast for five periods will be made in the future.

The following representation illustrates the threshold analysis with and without a forecast.

Threshold Value Analysis

Threshold Value Analysis

| | | |
|--|---|---------|
| Open orders | ≥ | 100 000 |
| Currency | | DM |
| No. of periods | | 3 |
| <input checked="" type="checkbox"/> Current period | | |

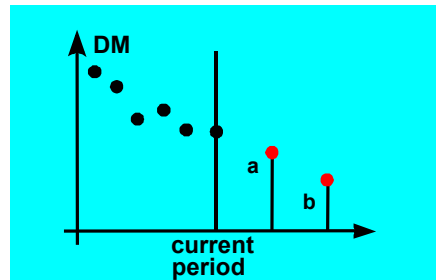


$a + b + c > 100\,000 ?$



with a forecast

| | | |
|--|---|---------|
| Open orders | ≥ | 100 000 |
| Currency | | DM |
| No. of periods | | 6 |
| <input checked="" type="checkbox"/> Current period | | |
| No. of forecast periods | | 2 |



$a + b > 100\,000 ?$



- forecasted data
- actual data

[Example: Threshold Value Analysis \[Page 28\]](#)

Procedure:

1. Position the cursor on the key figure for which you want to define or change requirements for a trend analysis and select *Edit* → *Define: Requirement*. A dialog box appears.
2. Select *Threshold analysis* and press *Enter*. A dialog box appears.
3. In the field behind the selected key figure, specify first the operator and then the threshold value. You can get a list of possible operators by using the possible entries key.

Threshold Value Analysis

4. To check whether a threshold value was reached in the future, based on actual data, you can perform a forecast. The forecasted data is determined based on actual data.

If you want to check a period of time in the future, whether a certain threshold value will be reached, specify the number of periods for which the forecast is to be done based on actual data, in the *No. of forecast periods* field. In this case, the actual data for the number of periods are read that were specified in the exception header (*No. of periods* field) and based on this actual data a forecast is created for the desired number of periods.



Note that with the forecast the threshold value refers to the number of forecasting periods; the number of periods for the analysis time period serves as a basis for the forecast.

If you do not want to carry out a forecast, you do not need to make any entries in the *No. of periods* field.

5. If you want to check the requirement for each individual period, select the field *Individual period*.
If this field is not selected, the values for the number of periods that were specified in the exception header (*No. of periods* field) will be cumulated and checked against the requirement.
In the forecast, the forecasted values are cumulated for the number of forecasting periods and checked against the requirement.
6. Press `Enter`.
Threshold value and operator are shown behind the selected key figure.

[Trend Analysis \[Page 29\]](#)

[Planned/Actual Comparison \[Page 31\]](#)

[Determining Follow-Up Processing \[Page 18\]](#)

Example: Threshold Value Analysis

Example: Threshold Value Analysis

The following exceptional situation should be defined:

All materials whose range of coverage is greater than 14 days in the next three periods.

Define the requirement:

Range of coverage > 14 and carry out a forecast for three periods.

Trend Analysis

When using the trend analysis the dataset can be checked for a positive or negative trend with regard to the selected key figure.



You would like to check whether sales have a positive trend or you want to check whether incoming orders show a negative trend.

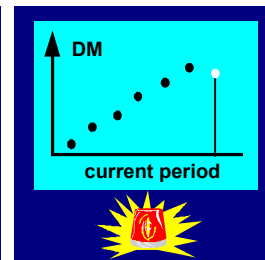
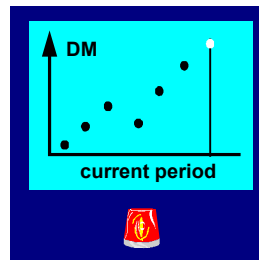
The system runs a check according to the data and the number of periods which you specified for the period to analyze on whether or not a trend exists. If you indicate 1 for the period to analyze then of course no trend will be determined.

If you specify a period to analyze of 3 or more, then you can also carry out a **statistical test for a trend** for each individual requirement by using statistical tools. This is recommended when you want to know whether a trend exists even if there are outliers according to the data. When 3 or 4 periods are used in the statistical test for a trend a regression line is formed on which the trend is determined and when 5 or more periods are used a more dependable statistical test for a trend is carried out.

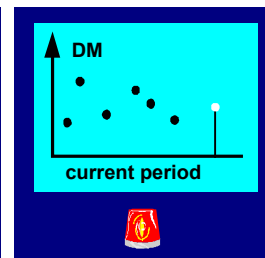
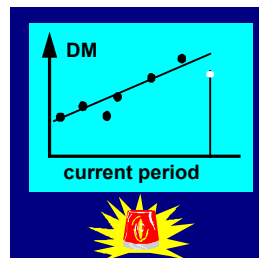
The following representation illustrates the trend analysis with and without statistical test.

Trend Analysis

| | |
|------------------|------|
| Sales | neg. |
| Currency | DM |
| No. of periods | 7 |
| Current periods | x |
| Statistical test | |



| | |
|------------------|----|
| Sales | - |
| Currency | DM |
| No. of periods | 7 |
| Current periods | x |
| Statistical test | x |



Procedure:

Trend Analysis

1. Position the cursor on the key figure for which you want to define or change requirements for a trend analysis and select *Edit* → *Define: Requirement*.
A dialog box appears.
2. Select *Trend analysis* and press `Enter`.
A dialog box appears where you can select the desired direction of the trend (positive or negative).
3. When using 3 or more periods to analyze you can subsequently perform an additional statistical trend.

If you want to perform a statistical test for a trend by using statistical tools, select the field *Statist. test*.

If you do not select this field, the system will only check whether the data points show an obvious rise or fall for the given period to analyze. That is, if there is only one outlier in an otherwise trend-like dataset, then no trend exists. (refer to previous illustration).
4. Press `Enter`.
The selected trend will appear behind the key figure.

[Threshold Value Analysis \[Page 25\]](#)

[Planned/Actual Comparison \[Page 31\]](#)

[Determining Follow-Up Processing \[Page 18\]](#)

Planned/Actual Comparison

In a planned/actual comparison you can check the plan realization and determine where exactly weak spots lie between planned and actual data. For this purpose, specify the plan realization in percent and give an operator.

The following formula is the basis of the plan realization calculation:

$$\text{Actual Value} / \text{Planned Value} * 100 = \text{Plan Realization}$$

When using a planned/actual comparison you can carry out a forecast, thereby checking the plan realization for a period of time in the future. The number of periods that are to be used for forecasting, are provided by you. The forecast uses historical data, that is, you can compare the planned numbers with the forecasted data, which is a result of past developments. This allows you to react quickly to undesirable situations in the future.



Please note that in a forecast the number of periods that you use to specify the period to analyze is the number used for the forecast. If you have chosen two periods for the period to analyze then these two periods will form the basis for the forecast. In addition, you must also specify the number of forecasting periods (*No. of forecasting per. field*). This is the number of periods upon which a forecast is made, based on the actual data. If you specify five here, for example, then this means that based on two periods in the past a forecast for five periods in the future can be created.

[Examples: Planned/Actual Comparison \[Page 33\]](#)

Procedure:

1. Position the cursor on the key figure for which you want to create or change requirements for a planned/actual comparison and select *Edit* → *Define Requirement*. A dialog box appears.
2. Select *Planned/actual comparison* and press *Enter*. A dialog box appears.
3. In the field *Plan realization* first specify the operator and then the deviation in percent. For a selection of operators use the possible entries key.
4. In the *Plan version* field, specify the number of the plan version which is to be used for the planned/actual comparison.
5. To check the plan realization for future periods, you can carry out a forecast and thereby compare planned figures with forecasted data. The forecasted data are determined based on actual data.

If you want to check the plan realization in the future, specify the number of periods for which a forecast is to be carried out, based on actual data, in the field *No. of forecast per.* In this case, the actual data are read for the number of periods that were specified in the exception header (*No. of periods* field) and based on these actual data a forecast will be made for the desired number of periods. The requirement is then checked for the specified number of forecasting periods, i.e., planned data will be compared to forecasting data.

Planned/Actual Comparison

- If you do not want to carry out a forecast, do not specify anything in the *No. of forecast per.* field.
- If you want to check the requirement for each individual period, select the field *Individual period*.
- If this field is **not** selected, the values for the number of periods that were specified in the exception header (*No. of periods* field) will be cumulated and checked against the requirement.
- With the forecast, the forecasted values for the number of forecasting periods will be cumulated and checked against the requirement.
- Press Enter.
The plan realization is shown behind the key figure.



Select *Exception* → *Save* to save your entries.

[Trend Analysis \[Page 29\]](#)

[Threshold Value Analysis \[Page 25\]](#)

[Determining Follow-Up Processing \[Page 18\]](#)

Examples: Planned/Actual Comparison

Example 1:

You want all of the customers displayed where the actual incoming order is less than 80% of the plan incoming order, i.e., the actual incoming order is more than 20% less than the plan incoming order; the plan realization therefore lies at approximately less than 80%.

You define the following requirement:

Incoming order, plan realization < 80%

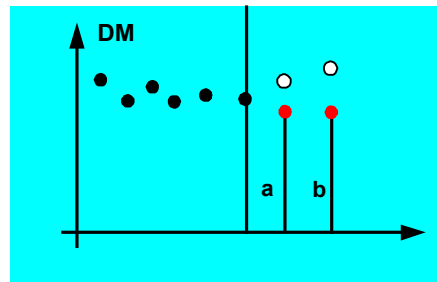
If you would like to test whether a comparison of the forecasted actual data with the planned data in the future based on the present actual data will be positive (that is, there is only a slight deviation), then carry out a forecast based on the actual data.

If, for example, you specified six periods to be analyzed and you choose two for the forecast, then the system will take data for two periods for forecasting purposes based on the six historical periods and compare it with the planning data for these two periods. In this case it is a comparison of forecasted data with planning data that is taken into consideration.

The following representation illustrates the example.

Planned/Actual Comparison with a Forecast

| | | |
|---------------------------|----|-----|
| u Incoming order | < | 80% |
| u Planning version | DM | |
| u No. of periods | 6 | |
| u Current period | X | |
| u No. of forecast periods | 2 | |



- Planning data version
- Actual data
- Forecasted data

$$\frac{\text{Total actual values}}{\text{Total planning values}} \times 100 < 80\% ?$$



Example 2:

You want a list of all customers whose actual incoming orders are more than 110% of the planned incoming orders (that is, all customers whose actual incoming orders extend beyond the planned incoming order by more than 10%, the plan realization is therefore more than 110%).

Define the following requirement:

Incoming orders, plan realization > 110%

Exception Groups

Exception Groups

[Example: Exception Group \[Page 38\]](#)

[Example: Exception Group \[Page 38\]](#)

[Creating an Exception Group \[Page 35\]](#)

[Changing an Exception Group \[Page 36\]](#)

[Displaying an Exception Group \[Page 37\]](#)

Creating an Exception Group

To check complex material you can combine individual exceptions into one exception group.

An exception group is useful,

- If you want to check complex and/or requirements (see Example: Exception Group Example 1)
- If you want to display various colors in a list (see Example: Exception Group Example 2)
- If you want to check various characteristic values for one characteristic (for example, plant 0001: order value > 10 000 and in plant 0002: order value > 20 000)
- If you want to combine the forecasting data check with an actual data check.

To create an exception group, proceed as follows:

1. From the information system menu, select *Early Warning System* → *Grouping* → *Create*. The initial screen appears.
2. In the field *Info structure*, specify the name of the information structure to which the exception group will refer.



Please note that you can only assign those individual exceptions of the exception group that refer to the same information structure.

3. In the field *Exception*, specify the name of the exception and in the next field give a description of the exception.
4. You can use an already existing exception group as a reference copy. If you want to use an already existing exception group as reference, specify the name of the exception group that will serve as the reference in the field *Exception*.



Copy the allocations and settings of the exception group follow-up processing that will serve as the reference.

5. Press `Enter`.
The maintenance screen for the allocations appears.

You can perform the following activities from this screen:

– **Making Allocations**

You can combine already existing individual exceptions into one exception group. When making allocations you support various selection functions. You can read more about this in [Allocations \[Page 39\]](#).

– **Determining the Follow-Up Processing**

You can read about how to determine the follow-up processing for the exception group in [Determining Follow-Up Processing for the Exception Group \[Page 45\]](#).

Changing an Exception Group

Changing an Exception Group

To change an exception group, proceed as follows:

1. From the information system menu, select *Early Warning System* → *Grouping* → *Change*.
2. Specify the name of the exception group that you want to change in the exception field.

From this screen you can perform the following changes:

- **Changing Allocations**

To change the allocations, select *Goto* → *Allocations*.

You can read about how to change the allocations in [Changing Allocations \[Page 44\]](#).

- **Changing the Follow-Up Processing**

To change the parameters for follow-up processing, select *Goto* → *Follow-up processing*.

You can read about which parameters are available and which can be changed in [Determining Follow-Up Processing for the Exception Group \[Page 45\]](#).

Displaying an Exception Group

If you want to display exceptional situations that are defined in an exception group, proceed as follows:

1. From the information system menu, select *Early Warning System* → *Grouping* → *Display*.
The initial screen will appear.
2. In the field *Exception*, specify the name of the exception group that you want to display. From this screen you can display the allocations of the exception group or the follow-up processing parameters.
 - By selecting *Goto* → *Requirements*, you can display the allocations.
 - By selecting *Goto* → *Follow-up processing*, you will get the conditions for the follow-up processing.

Example: Exception Group**Example: Exception Group****Example 1**

You want to check materials for a positive trend with regard to stock value *and* whose stock value is more than \$20,000. These materials will be displayed in red. All materials whose stock value is over \$20,000 will be shown in yellow.

In this case proceed as follows:

1. Determine an individual exception for the characteristic material in which the following requirements are defined:

Requirement A:

in the form of a trend analysis: stock value shows a positive trend

Requirement B:

in the form of a threshold value analysis: stock value > 20,000

Combine both requirements with *and* and in the follow-up processing assign red to the exception.

2. Determine an individual exception in which the following requirement is defined:

Requirement C:

In the form of a threshold value analysis: stock value > 20,000.

In the follow-up processing, assign yellow to the exception.

3. Combine both individual exceptions to one exception group and select *or* as the link.

Example 2

You want to optimize your warehouse stock. For this reason you check the inventory turnover (quotient from usage and average stock) of the stock. You have set the following rules:

- A An inventory turnover less than 3 is problematic.
- B An inventory turnover greater than 3, but less than 6 is acceptable.
- C An inventory turnover greater than 6 is ideal.

You want to check these requirements with *one* exception and assign a different color to every requirement.

In this case, proceed as follows:

1. For cases A, B and C, define an individual exception and assign red, for example to requirement A, yellow to requirement B and green to requirement C.
2. Determine an exception group and assign the three individual exceptions to the exception group.

Allocations

Parameters for the Exception Group

The following parameters must be defined:

- **Currency and Exchange Rate Type**

In the analysis currency group in the field *Currency*, specify the key of the currency and in the field *Currency exchange rate* specify the key for the currency exchange rate.

- **Periods**

In the period to analyze group in the field *No. of per.*, specify the number of historical periods that should be taken into consideration during a check.

If you want to include the current period in your check, select *Current period*.

If you specify for example, three periods, then the values of three periods will be totaled and it will be for this value that the requirement will be checked when a planned/actual comparison and a threshold value analysis are made.



The number of periods that is shown here can be found in the exception analysis as the default value for the period to analyze. The number of periods for the individual exceptions is not important in the exception group.

Note that if the default value is overwritten during the exception analysis it will probably lead to incorrect interpretations. For example, if the exceptional situation that is defined in the exception is based on data for the number of periods that has been determined here. Thus, an analysis with a threshold value of 10,000 and 2 periods will have other results than if the number of periods used was 5.

The number of periods in the individual exceptions is in this case not important.

- **Type of Requirement Link**

In the link group, select the type of link (and/or) for the individual exceptions that are assigned to the exception group.

In the and-link only those characteristics or characteristic values are given which apply to all of the requirements (average quantity). In the or-link the characteristics or the characteristic values are given which apply to at least one requirement (combined quantity).



It is here that you can determine the type of link for the individual exceptions that are assigned to the exception group. In turn, how the individual requirements are linked to one another is also determined in the individual exceptions.

[Allocating Exceptions \[Page 40\]](#)

[Determining Follow-Up Processing for the Exception Group \[Page 45\]](#)

Allocating Exceptions

Allocating Exceptions

There are several ways to assign existing individual exceptions to an exception group and there are a number of selection functions that are available to you.



Please note the following **rules** when making allocations. Exceptions that do not apply to these rules cannot be assigned.

1. Only individual exceptions can be assigned to an exception group, that is, no other exception group can be assigned to an exception group.
2. All exceptions in the exception group must refer to the same information structure, that is, you can only assign those exceptions which have the same underlying information structure.
3. All exceptions must have the same characteristics and the same sequence of characteristics so that there is a clear indication in the standard analyses and in the exception analysis.
The first assigned exception with a characteristic reference determines the characteristics and their sequence for all of the exceptions, which can be assigned to the exception group.
4. You can only assign those exceptions with key figures for which you have an authorization.

[Example: Allocation Rules \[Page 43\]](#)

Making allocations can be carried out in the following ways:

- Manually
- Using the selection list
- Copying allocations

Entering Allocations Manually

If you want to manually allocate exceptions to the exception group, specify the name of the exception that you want to assign in the group *assigned exceptions* in the fields under *Exception*.

While doing so, please note the rules above.

Behind the name of the assigned exception you will see in the field *C* the color key in which the exception will appear in the standard or exception analysis, as well as the field *Per* which gives the number of periods for the individual exception.

Performing Allocations Using the Selection List

The selection list will provide help when making exceptional allocations. You can easily establish an exception group because only those exceptions will be shown in the selection list that can also be assigned based on the rules. You can thus build step by step an exception group by calling up the selection list several times.

In order to avoid possible inconsistencies from occurring with regard to the exceptions that are shown in the selection list, you can also determine a **reference exception**. Inconsistencies can then occur, for example if no clear characteristic reference is apparent. The reference to an

Allocating Exceptions

information structure and the characteristic reference are then clearly determined by the reference exception. If an exception was already assigned this will then act as the reference exception.

If you want to assign exceptions by using the selection list, proceed as follows:

1. Select *Edit* → *Selection list* → *Selection list*.
A dialog box appears with a list of exceptions that can be assigned.
2. In order to assign an exception from the exception group selection list, select the desired exception and press *Enter*.
The selected exception will be copied into the list of assigned exceptions. Behind the name of the assigned exception is the color key in the field *C* where the exception is displayed in the standard or exception analysis, as well as the number of periods that have been set for the individual exception in the field *Per*.



Please note that the first assigned exception acts as the reference exception. Should this exception have a characteristic reference and clearly refer to an information structure then the selection list will automatically be restricted to exceptions which have the same prerequisites.

Setting the Reference for the Selection List

If no exception has been assigned you can specify a reference exception in order to restrict the selection list.

To determine a reference exception for the selection list, proceed as follows:

1. Select *Edit* → *Selection list* → *Set reference*.
A dialog box appears.
2. In the field *Reference-exception* specify the name of the exception that will act as the reference for the selection list.

Copying Allocations

You can copy the allocations of an existing exception group.

Proceed as follows:

1. Select *Edit* → *Copy allocations*.
A dialog box appears.
2. In the field *Exception* specify the name of the exception group whose allocations you want to copy and press *Enter*.
The allocations of the specified exception group will be copied into the maintenance screen.
Behind the name of the assigned exception is the color key in the field *C* where the exception is displayed in the standard or exception analysis, as well as the number of periods that have been set for the individual exception in the field *Per*.



Please note that allocations that have already been made will be overwritten during the copying process.

Allocating Exceptions

Displaying the Allocated Exception

For monitoring purposes you can display the requirements and characteristics of an allocated exception.

Position the cursor on the exception that you want to display and select the pushbutton `Display exception`. You are now in the display mode for exceptions.

Deleting Allocations

To delete an allocation, position the cursor on the exception that you want to delete and select `Edit` → `Delete allocation`.



Select `Grouping` → `Save` to save your entries.

[Determining Follow-Up Processing for the Exception Group \[Page 45\]](#)

Example: Allocation Rules

Create an exception group that refers to information structure S012. All of the individual exceptions that you can allocate must refer to the same information structure.

The first exception that you allocate to the exception group encompasses requirements for the characteristics purchasing group and vendor. All of the exceptions that you would now like to allocate to the exception group must also have both characteristics as characteristic references in the identical sequence so that a clear indication is made in the standard and exception analysis.

Changing Allocations

Changing Allocations

Changing the Parameters for the Exception Group

The following parameters must be defined:

- **Currency and Exchange Rate Type**

In the analysis currency group in the field *Currency*, specify the key of the currency and in the field *Currency exchange rate* specify the key for the currency exchange rate.

- **Periods**

In the period to analyze group in the field *No. of per.*, specify the number of historical periods that should be taken into consideration during a check.

If you want to include the current period in your check, select *Current period*.

If you specify for example, three periods, then the values of three periods will be totaled and it will be for this value that the requirement will be checked during a planned/actual comparison and threshold value analysis.



The number of periods that is shown here can be found in the exception analysis as the default value for the period to analyze. The number of periods of the individual exceptions is not important in the exception group.

Note that if the default value is overwritten during the exception analysis it will probably lead to incorrect interpretations. For example, if the exceptional situation that is defined in the exception is based on data for the number of periods that has been determined here. Thus, an analysis with a threshold value of 10,000 and 2 periods will have other results than if the number of periods used was 5.

The number of periods in the individual exceptions is in this case not important.

- **Type of Requirement Link**

In the link group, select the type of link (and/or) for the individual exceptions that are assigned to the exception group.

In the and-link only those characteristics or characteristic values are given which apply to all of the requirements (average quantity). In the or-link the characteristics or the characteristic values are given which apply to at least one requirement (combined quantity).



It is here that you can determine the type of link for the individual exceptions that are assigned to the exception group. In turn, how the individual requirements are linked to one another is also determined in the individual exceptions.

You can read about how to assign new exceptions or how to delete already made allocations in [Allocating Exceptions \[Page 40\]](#).

By using *Goto* → *Follow-up processing* you can change the conditions for the follow-up processing of the exception group. For more information refer to [Determining Follow-Up Processing for the Exception Group \[Page 45\]](#).

Determining Follow-Up Processing for the Exception Group

You can determine the conditions or attributes for producing the exception group.

To get to the follow-up processing function, select *Goto* → *Follow-up processing*.

You can set the following conditions for the exception group:

Standard Analyses

You can display the exceptional situations in either a standard analysis or exception analysis. When carrying out a standard analysis you can specify an exception or exception group (see [Performing Standard Analyses \[Ext.\]](#)). The prerequisite is that the standard analysis and the exception group are based on the same information structure. The exceptional situations can be highlighted within the framework of the standard analyses via different colors. By using different colors a selective navigation within the standard analysis is possible, since exceptional situations have already been displayed on a higher aggregation level.

The exception analysis (please see [Exception Analysis \[Page 56\]](#)) is essentially a standard analysis, that is, you can also perform all of the functions of the standard analysis. The major difference between displaying the exceptional situations in the other standard analysis is, however, that the exception analysis acts like a filter. Only that data is displayed to which the exception applies. Even with the exception analysis, the exceptional situations are highlighted in different colors.

Proceed as follows:

To activate the exception group for the standard or exception analysis, select the field *Active for standard analysis*.

Periodic Analyses

With the periodic analyses, you will be notified by the system about the exceptional situations that are defined in the Exceptions. The existing dataset is systematically checked for exceptional situations at a frequency that is chosen by you (hourly, weekly, monthly). If an exceptional situation should occur either you or another recipient will be notified via mail or fax or you can initiate a workflow transfer that will eventually trigger a follow-up processing procedure.

There are two ways that a periodic analysis can be performed: event-driven or system-driven. In the event-driven periodic analysis the search for exceptional situations can only occur if there is a change in the data due to on an event occurrence (purchase order, stock movement, order) in comparison to the last analysis. In the system-driven periodic analysis the entire selected dataset is checked for exceptional situations.

Proceed as follows:

1. To activate the exception group for a periodic analysis, select the field *Active for periodic analysis*.



If a periodic analysis was already created for the exception group, you cannot change this field in the change mode. If the exception is no longer active for the periodic analyses, then you must first delete the periodic analysis for the exception.

2. Determine the conditions for the type of information transfer if an exceptional situation occurs.

Determining Follow-Up Processing for the Exception Group

- If you want to transfer to workflow, select the field *Transfer to workflow*.



You can find further information about using Workflow in the Early Warning System in the documentation on *SAP Business Workflow* in the section *Workflow Scenarios in Applications* under *Logistics Information System: Trigger Workflow from an Exception in the Early Warning System (LO-LIS)*.

- If you want to send info by mail, select the field *Send mail* and specify the name of the recipient in the subsequent field.



By using the function *Process* you can branch from mail into the assigned exception analysis and display the exception situation. Those selection criteria that were specified in the periodic analysis were taken into account (analysis currency, characteristic values).

- If you want to send a fax, select the field *Fax*. Specify the country code and the fax or telephone number in the subsequent fields. If you want a specific formula for the page layout, specify the name of the layout in the field *Layout set*.

By using the **Customer-Exit EXIT_SAPLMCY_002** (enhancement MYCA0001), you can save text to the variables in the layout set that can then be read.

- Information about an exception situation can be sent not only to one recipient, but to many people that belong to a general distribution list. Items that might be included in a distribution list are fax numbers, telex numbers or Internet addresses. In order to notify members of a distribution list about an exception situation, select the field *Copy to distribution list* and specify the name of the distribution list in the field *Distribution list name*.
To display the list of distribution list members, position the cursor on the name of the distribution list in the field *Distribution list name* and select the function *Select*.
If you want to know what kind of distribution lists are available, specify in the field *Distribution list name* '*' and press Enter. A dialog box appears with a general listing of all of the existing distribution lists.



In the *Usage* field you can indicate whether the periodic analysis is system-driven, event-driven or if it has not yet been created. With the initial data creation "none" will consequently always be displayed.



Save the entries with *Grouping* → *Save*.

Periodic Analyses

When using the periodic analyses, you will be notified by the system about the exceptional situations that are defined in the exceptions. The existing dataset is systematically checked for exceptional situations at a frequency that is chosen by you (hourly, weekly, monthly). If an exceptional situation should occur either you or another recipient will be notified via mail or fax or you can initiate a workflow transfer that will eventually trigger a follow-up processing procedure.

There are two types of periodic analyses:

- Event-driven

or

- System-driven.

In the event-driven periodic analysis the search for exceptional situations can only occur if there is a change in the data due to on an event (purchase order, stock movement, order) in comparison to the last analysis.

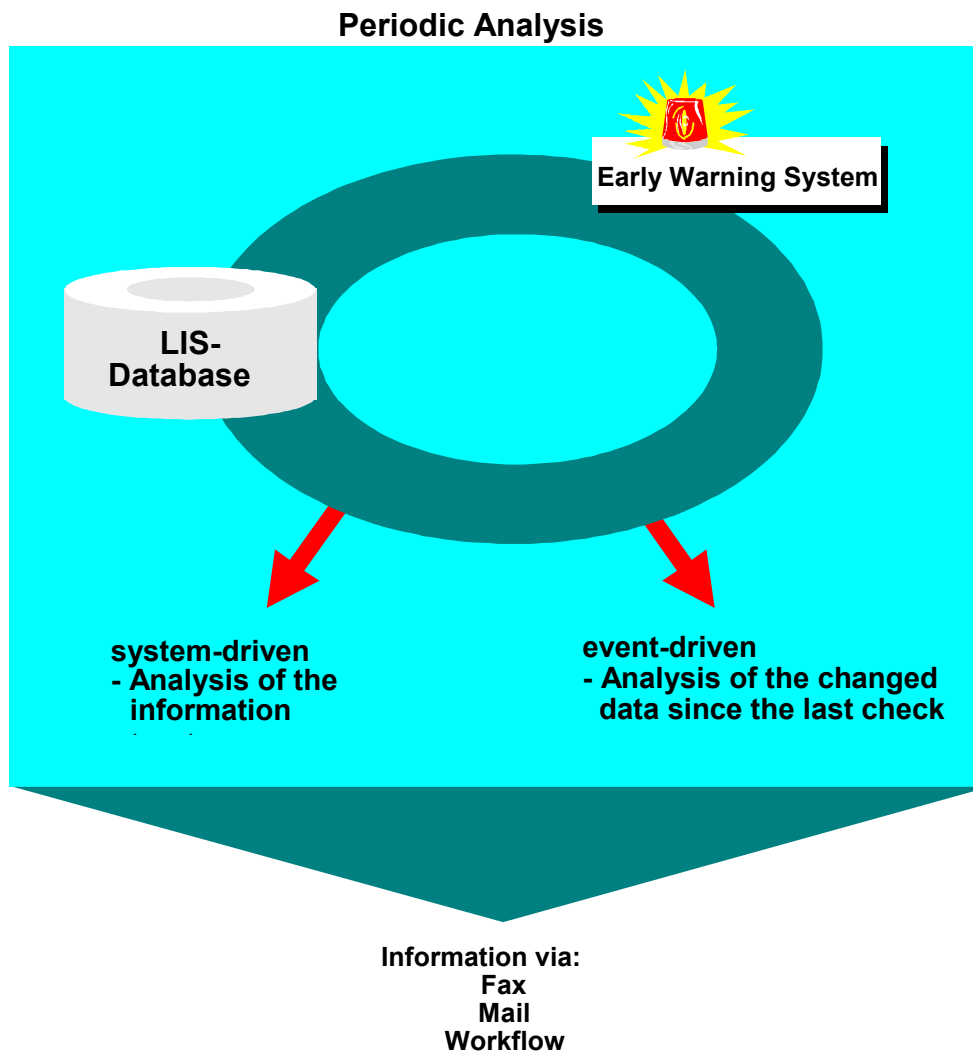
In the system-driven periodic analysis the entire selected dataset is checked for exceptional situations.

Only *one* type of periodic analysis can be determined for each exception.



You can only perform an event-driven or system-driven periodic analysis for an exception or exception group if it was activated for the periodic analysis in the follow-up processing.

Periodic Analyses



To carry out a periodic analysis, you must perform the following steps:

A. Prerequisite: Exception is Active for the Periodic Analysis

You must activate the exception or exception group in the parameters for the follow-up processing for the periodic analysis (see: [Determining Follow-Up Processing \[Page 18\]](#) or [Determining Follow-Up Processing for the Exception Group \[Page 45\]](#)).

B. Creating an Analysis Area

You must create an area to be analyzed for the exception or exception group. This area to be analyzed is a result of the underlying information structure characteristics. You will store the values for the analysis area in the form of a variant.

You can read about how to proceed in [Creating an Analysis Area \[Page 50\]](#).

Information about how to change the analysis area is in: [Changing an Analysis Area \[Page 52\]](#).

Information about how to display the analysis area is in: [Displaying an Analysis Area \[Page 54\]](#).



Please note that only *one* variant can be created for an exception or exception group. You can also only define this variant with the Early Warning System function *Creating or changing an analysis area*, and not with the ABAP variant maintenance functions. The same also applies to deleting the variants.

C. Scheduling a Periodic Analysis

You must schedule the periodic analysis, that is, you must determine the start of the background processing. When you schedule a periodic analysis you must determine when the data should be checked for the exceptional situation which is defined in the exception. For example, should the check begin immediately or at the beginning of the month.

This procedure is described in [Scheduling the Periodic Analysis \[Page 55\]](#).

[Creating an Analysis Area \[Page 50\]](#)

[Changing an Analysis Area \[Page 52\]](#)

[Scheduling the Periodic Analysis \[Page 55\]](#)

Creating an Analysis Area

Creating an Analysis Area



Please note that only *one* variant can be created for an exception or exception group. You can also only define this variant with the Early Warning System function *Creating or changing an analysis area*, and not with the ABAP variant maintenance functions. The same also applies to deleting the variants.

To determine the area to be analyzed for an exception or exception group, proceed as follows:

1. From the information system, select *Early Warning System* → *Periodic analysis* → *Area to analyze* → *Create*.

The initial screen appears.

2. In the field *Exception*, specify the name of the exception for which you want to create the analysis area.

3. There are two types of periodic analyses:

- Event-driven

In the event-driven periodic analysis the search for exceptional situations can only occur if there is a change in the data due to on an event (purchase order, stock movement, order) in comparison to the last analysis.

- System-driven

In the system-driven periodic analysis the entire selected dataset is checked for exceptional situations.



Please note that only *one* variant can be created for an exception or exception group. You can also only define this variant with the Early Warning System function *Creating or changing an analysis area*, and not with the ABAP variant maintenance functions. The same also applies to deleting the variants.

Select the type of analysis and press `Enter`.

A dialog box appears.

4. In the field *Variant*, specify the name of the variant and select the function *Create*. A selection screen now appears.
5. Specify the desired selection criterion. You can use the system help functions for assistance.



The characteristic values that are given in the exception are copied into the selection screen as default values. The field *Currency analysis* has already been filled with information, but can be overwritten. The currency is set which was specified as the analysis currency for the exception.

6. Press `Continue`:

An overview screen appears where you can enter certain parameters for variants.

Creating an Analysis Area

7. In the field *Description*, provide a short description of the variant.
8. Save the entries.

Changing an Analysis Area

Changing an Analysis Area



Please note that only *one* variant can be created for an exception or exception group. You can also only define this variant with the Early Warning System function *Creating or changing an analysis area*, and not with the ABAP variant maintenance functions. The same also applies to deleting the variants.

To change an area to analyze for an exception or exception group, proceed as follows:

1. From the information system, select *Early Warning System* → *Periodic analysis* → *Area to analyze* → *Change*.

An initial screen appears.

2. In the field *Exception*, specify the name of the exception for which you want to change the area to analyze and press `Enter`.

The selection screen appears.

3. Change the selection criterion.
4. Save the entries.

[Deleting the Analysis Area \[Page 53\]](#)

Deleting the Analysis Area

To delete the area to analyze for an exception or exception group, proceed as follows:

1. From the information system select *Early Warning System* → *Periodic analysis* → *Area to analyze* → *Change*.

An initial screen appears.

2. In the field *Exception*, specify the name of the exception whose analysis area you want to delete and press *Delete*.

Displaying an Analysis Area

Displaying an Analysis Area

To display the analysis area for an exception or exception group, proceed as follows:

1. From the information system select *Early Warning System* → *Periodic analysis* → *Area to analyze* → *Display*.

The initial screen appears.

2. In the field *Exception*, specify the name of the exception whose analysis area you want to display and press `Enter`.

The selection screen appears.

Scheduling the Periodic Analysis

When scheduling a periodic analysis, you determine the cycle in which the data is to be checked for the exceptional situation that is defined in the exception. You can decide whether you want hourly, daily or weekly checks performed.

If you want to schedule a periodic analysis, proceed as follows:

1. From the information system menu, select *Early Warning System* → *Periodic analysis* → *Schedule*.
2. In the field *Exception*, specify the name of the exception that you want to schedule and press `Enter`.
A window will appear.
3. Select the date/time key. The entry fields for the start date are displayed.
4. Specify the start time and select the field.
5. Select the field *Periodic job*.
6. Select the function *Period values*. A dialog box appears with the possible periods (daily, weekly, etc.).
7. Select the desired period value and select the function *Save*. You now return to the screen displaying the start date values.
8. Select the function *Save*.



The other possibilities for defining a start date and how to proceed can be found in the document *BC System Management*.

Overview of Job

You can display a job overview to an exception. The job overview displays the background jobs for an exception and its status (planned, released, ready, active, completed, or interrupted).

From the overview list you can change the status of the job.

To branch to the job overview, proceed as follows:

1. From the information system menu, select *Early Warning System* → *Periodic analysis* → *Schedule*.
2. In the field *Exception*, specify the name of the exception for which you want a job overview.
3. Select the *Overview* pushbutton.
You will then branch to the job overview screen.

Exception Analysis

Exception Analysis

In contrast to the other standard analyses where the exceptions are displayed, in the case of the exception analysis, only data which applies to the exception is shown. The exception analysis acts like a filter whereby only the exceptional situations are shown. In this case the exceptional situations are also highlighted. All of the functions (ABC Analysis, Graphics, Classification, etc.) of the remaining standard analyses can of course also be used in the exception analysis.



Please note the following remarks about the settings:

Selection Area

The characteristic values, the number of periods (time period for the analysis) and the currency analysis, which you specified when you created/changed the exception or exception group, will appear as the default values for the selection area of the exception analysis. These selection criterion can of course be overwritten by you when you carry out the exception analysis.

Note that if the default value is overwritten during the exception analysis it will probably lead to incorrect interpretations. For example, if the exceptional situation that is defined in the exception is based on data for the number of periods that has been determined here. Thus, an analysis with a threshold value of 10,000 and 2 periods will have other results than if the number of periods used was 5.

Standard Drill-Down

The settings for the standard drill-down are also copied from the exception. The sequence of the standard drill-down and the characteristics according to which you drill-down correspond to the characteristics and their sequence from the exception. The key figures are displayed which were indicated in the requirements of the exception.

[Performing an Exception Analysis \[Page 57\]](#)

Performing an Exception Analysis

To carry out an exception analysis, proceed as follows:

1. From the information system menu, select *Standard analysis* → *Exception analysis*.
2. In the field *Exception*, specify the name of the exception.
3. You can copy the parameters (number of periods, currency analysis) that you specified when creating/changing the exception or exception group as selection criterion or you can individually maintain the selection area.
 - If you want to copy the default values from the exception for the selection area, do **not** select the field *Maintain selection area* but select *Exception analysis* → *Execute*.
A list of data will appear that will apply to the exception. The exceptional situations are highlighted.
 - If you want to maintain the selection area, select the field *Manual selection* and select *Exception analysis* → *Execute*.
A selection screen will appear. The characteristics of the information structure will appear as selection parameters that are based on the specified exception. Maintain the selection criterion and select the key *Execute*.
A list of data will appear that applies to the exception. The exceptional situations are highlighted.



Note that if the default value is overwritten during the exception analysis it will probably lead to incorrect interpretations. For example, if the exceptional situation that is defined in the exception is based on data for the number of periods that has been determined here. Thus, an analysis with a threshold value of 10,000 and 2 periods will have other results than if the number of periods used was 5.