Contents

Introduction

Available “order approval” approaches in TM Master

After the quotation process an order should have a total order value, this order value will need to be approved prior to sending it to the supplier. TM Master has three available approches to approving orders. One of them, the “Approval Level based” is made more or less obsolete by the recently added Rule-based approval function.

1. **Standard Approval**
   Users are assigned a user right to approve an order. If a user has the “ApproveAtOffice” user right the user can approve any order, regardless of value or any other details on the order. This is a simple way of approving orders, that may work for small companies, but will most likely be too basic for larger companies

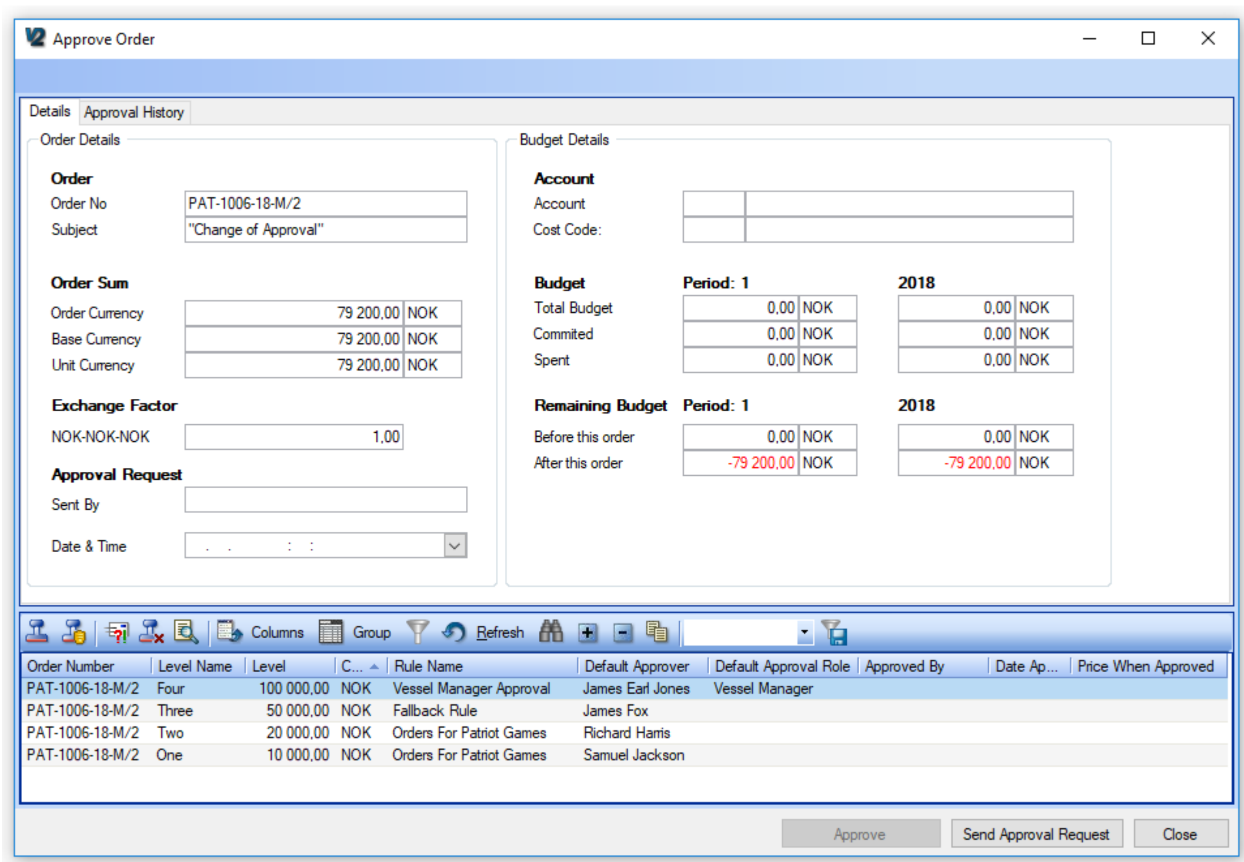
2. **Approval Level based**
   Approval level based approval will, by using value levels, differenciate between who will be allowed to approve the order. Each value level can be linked to one or more user groups. Any users within that user group will be allowed to appove an order with a value within the assigned value level. Only when the top value level of the order is approved, will the order technically be approved. However each sub level may also be approved, as in a chain of approvals. Who will approve each level is done by a manual selection among users with the appropriate user rights, by the purchaser. A manual action is required to notify each level’s approver.

   This function is made more or less obsolete by the “rule-based” approval matrix. The “rule-based approval” will be able to provide the same functionality, but will also remove the manual actions required for each level

3. **Rule-based approval**
   Rule-based approval, will also use approval value levels, but will automatically select who will approve each level using a set of configured rules. The conditions of the rules can be the order’s orignating vessel, Order type, Order WBS, account and/or cost code. As with the “approval Level based” approval, only when the top value level of the order is approved, will the order technically be approved. However each sub level may also be approved, as in a chain of approvals. With the rule-based approval, the purchaser will initiate the approval process, by sending a “request for approval” to the user selected for the lowest level , and TM Master will notify each user in turn working its way up to the top approval level.

How does the rule-based approval matrix work?

1. Once the order has a selected supplier and the order has a total value
2. Click the [Approve] button in the order head menu.
3. The below form will appear:



4. In the grid at the bottom of the form, a list of approval levels will show with the name of the assigned default approvers for each level.
5. Click the [Send Approval Request] button to send a request for approval to the approver on the first approval level.
6. Click [Close]
7. The user on the first level of approval will be notified that an order Is up for his\her approval, either by an external e-mail or by TM Master internal e-mail.
8. Once the first level has been approved, the user on the next level is notified that an order is up for approval. For every level approved the next assigned user in line is notified. When the top level has been approved the order is "Approved" and can be sent to the supplier.

How to configure and activate the "rule-based approval matrix"?

1.1. Add the approval value levels.

The "approval value levels" represent the limits on an order value a user is authorized to approve. They can also serve as an orders approval chain or steps.

1.2. Create your approval rules with conditions

Each rule can be configured to assign users to one or more of the approval levels, should the rules conditions be met.

1.3. Test your Rule-based approval matrix

A test function is available, allowing you to test that your configured rules meet your expectations

1.4. Activate the "Rule-based approval matrix"

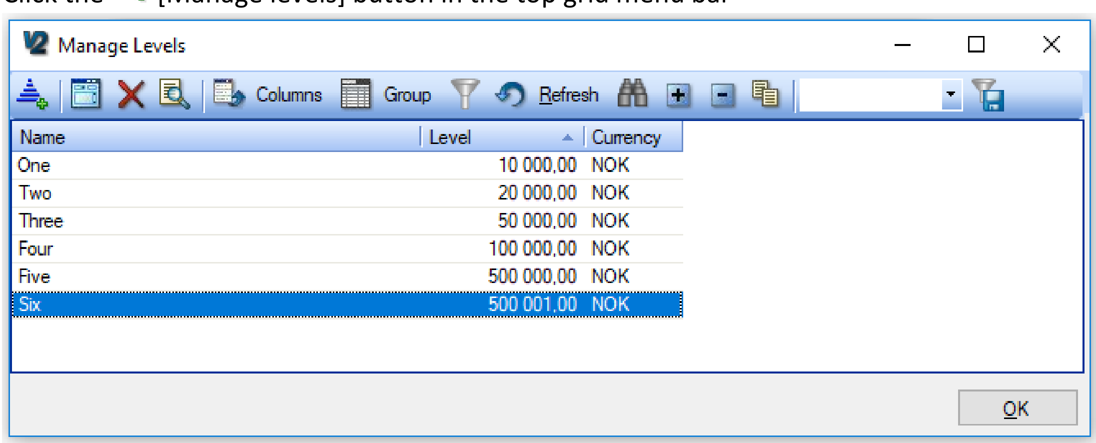
Once the required approval rules have been configured, the function needs to be activated in order to affect the approval process in TM Master.

1.1 How to add "approval value levels"

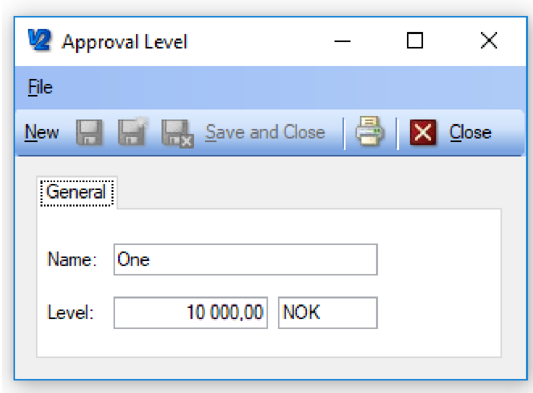
Log on to TM Master with a user with access to configure PO settings in the system

1. Click [System] → [Settings] → "Order settings" tab → "Approval rules" sub tab

2. Click the [Manage levels] button in the top grid menu bar



3. Click the [Add new level]



4. Enter a "Level Name" and the level "up to" approval limit.
   Approval limit currency will always be entered in the system's "Base currency"
5. Add as many levels as required. Note that an approval level's span will cover from it's defined value down to the value of the level that is numerically below it. However, this does not apply for the highest level that is defined. The highest level defined will cover any values above the second highest level.

Example:

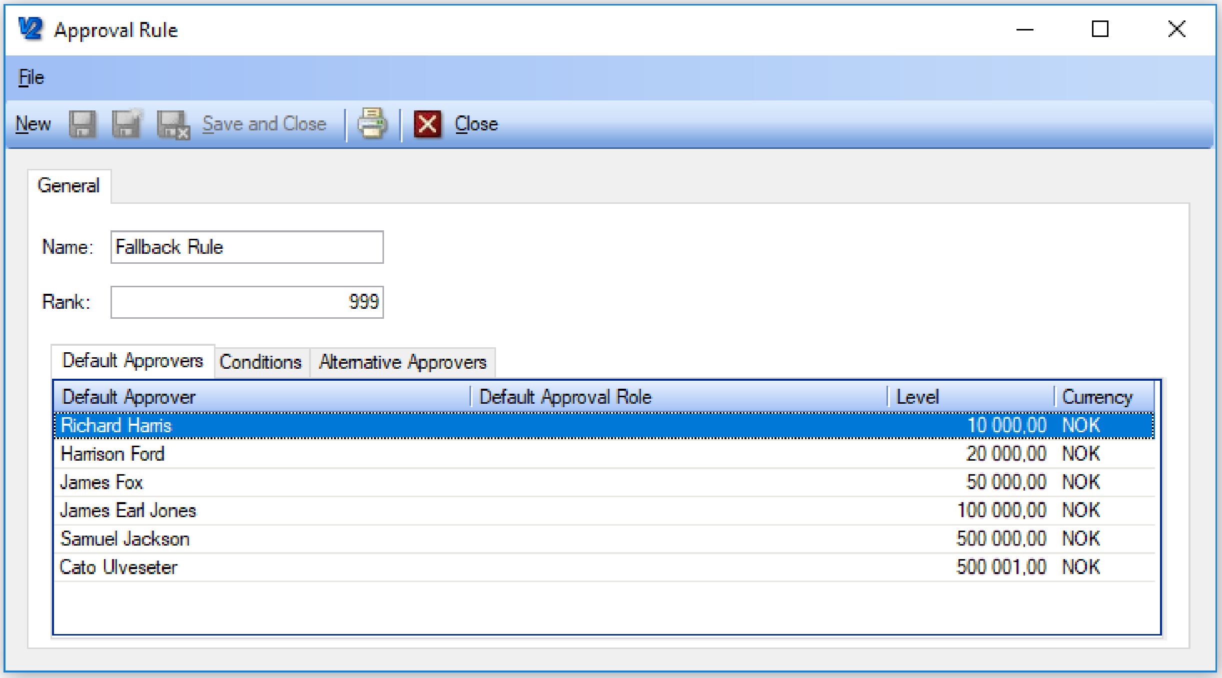
- Level "One" is set up to 10.000, since no lower limit is found the level spans from 0 to 10.000
- Level "Two" is set up to 20.000, the second level will then span from 10.000 to 20.000
- Level "Five" is set to 500.000
- Level "Six" is the highest level and set to "500.001" and will span from 500.000 (previous level and upward) The actual level value set on the highest level will not set any numerical limits for approval. As long it is the highest level it will span from the second highest level to infinity (500.000 (in this example) and upward)

1.2 How to add approval rules?

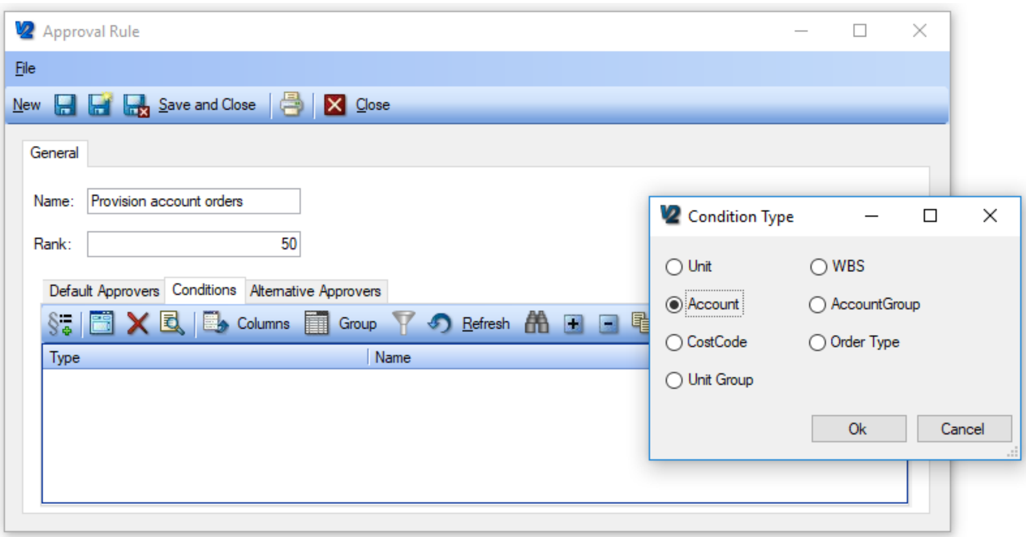
Before adding any rules, make sure the "Approval levels" described above have been set up. You are required to configure at least one approval level and one rule for the "rule-based approval matrix" to work.

1. Log on to TM Master with a user with access to configure PO settings in the system
2. Click [System] → [Settings] → "Order settings" tab → "Approval rules" sub tab
3. Click the [Add New Rule] button in the top grid menu bar
4. Give the rule a name
5. Enter a rule rank. The rule "Rank" will represent the order in which rules are considered when looking for a level approver. A low rank number will be considered before a high rank number.
6. To assign a user or role to an approval level for this rule, Double click the approval level in the grid on the "Default approvers" sub tab, and select a specific "user" or "role". (roles will be described later in this document) If the conditions for the rule are met by an order, the approval levels specified under "Default Approvers" will be assigned for the order, unless a previous rule (with a

lower rank number) has already populated the level with a default approver name.



7. Click the “Condition” sub tab
8. Click the [Add condition] button



9. Select a condition parameter type.

Unit: Adding a unit condition will restrict the rule to orders that are for the specified unit(s). It is possible to add multiple units as conditions for a rule

Unit Group: Adding a unit group condition will restrict the rule to orders that are for the specified unit(s) in the unit groups. It is possible to add multiple unit groups.

Account: Adding an account condition will restrict the rule to orders using the specified account(s). One rule can include multiple account conditions

Account Group: Adding an account group condition will restrict the rule to any orders using an account found in that group. One rule can include multiple account groups.

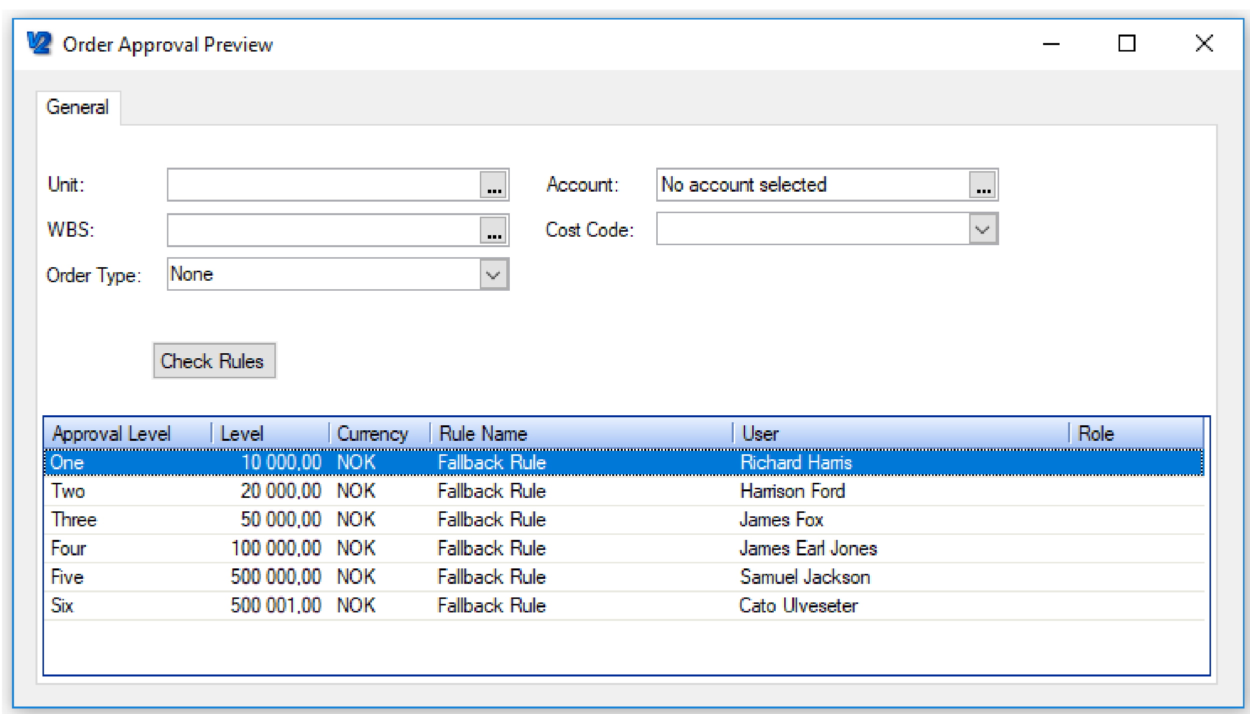
Cost Code: Adding a cost code condition will restrict the rule to orders using the specified cost code(s). One rule can include multiple cost code conditions.
WBS: Adding one or more WBS code conditions will restrict the rule to orders using the specified WBS code(s).
Order type: Adding one or more Order type conditions will restrict the rule to orders of the specified order type(s).

10. To add "Alternative approvers" to any of the levels, click the "Alternative Approvers" tab.
    a) Click "Add User" to select a single user
    b) Click [Add User Group] to select a group of users.
11. Select the desired "user" or "user group", and select which level the user\user group should be able to approve.
12. [Save and Close] the rule.
13. You may now test the rules (ref next chapter)

1.3 How to use the [Check Rules] function?

To test that your rule configuration works as intended, you can use the [Check Rule] function. This tool will simulate the population of approval levels for orders using the current configuration.

1. Log on to TM Master with a user with access to configure PO settings in the system
2. Click [System] → [Settings] → "Order settings" tab → "Approval rules" sub tab
3. Click the [Check Rules] button



4. You can now set any desired conditions for your simulation
   (a) **Unit:** Will allow you to select any one of the units in the system

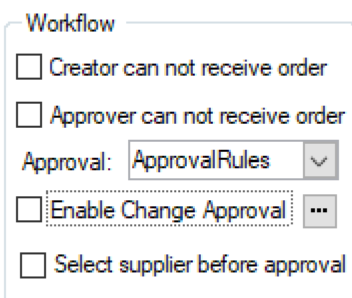
(b) **WBS:** Will allow you to select one of the WBS codes available in the system.
(c) **Order type**: Will allow you to select any of the order types.
(d) **Account:** Will allow you to select any of the existing accounts.
(e) **Cost code:** Will allow you to select any of the cost code available

5. Click the [Check Rule] button
6. All approval levels should be populated when testing (if not there are holes in your matrix)
7. In the column “Rule Name”, you will be able to see what rule was used to find the approver for the level

1.4 How to activate the rule-based approval matrix?

Once the rule-based matrix has been configured with rules and testing them gives the expected result. You can activate the “Rule-Base Approval Matrix” function.

1. Please set up your rules
2. Click [System] → [Settings] →”Order settings” tab → “General” sub tab
3. On the “General” sub tab the following group of settings may be found.



4. Select “ApprovalRules” in the “Approval:” field.
5. Click [Save] in the top menu.
6. Ticking the “Select supplier before approval” is recommended, as it will force the users to select a supplier before the approval process can be started. If supplier is not selected, the order may not have the correct value.

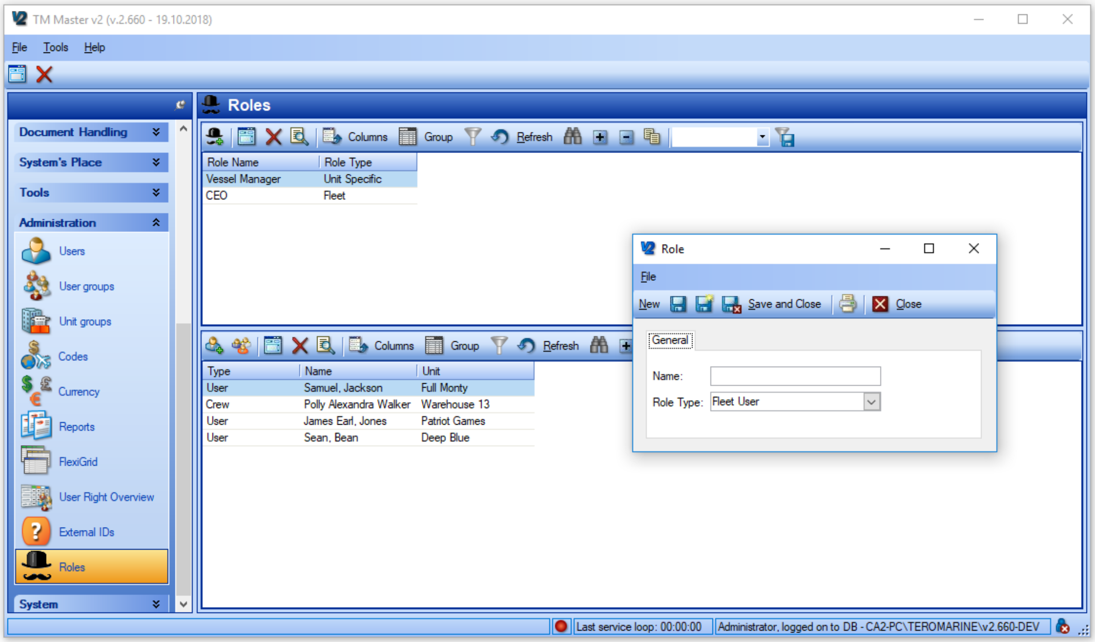
Using “roles” on an approval level?

It is, of course, possible to create one rule for each vessel and add the actual person (user) to the level in question. However, a different approach would be to use a “role”, which will only require one rule that would apply to all units to achieve the same thing. In some instances, the approver should be a position or a role for a single unit, as it is likely that different people fulfil this role for each individual unit at different times. Here is how you would do this.

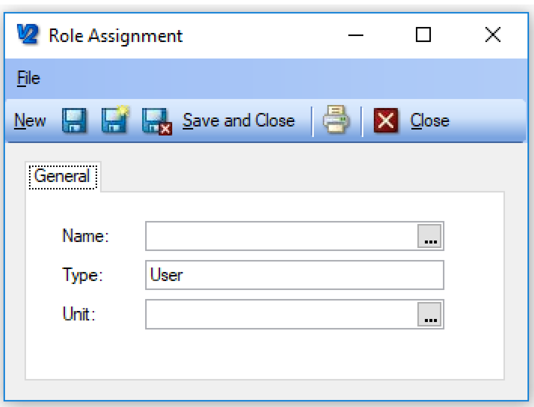
1. Create your Unit and/or Fleet roles.
2. Assign users to the different roles
3. Select the role as the approver for an approval level

How to create and assign users to a Role?

1. Click the [Add New Role] button in the top grid menu bar.



2. Click [Administration] → [Roles]
3. Enter a name for the "Role"
4. Select if it is:
   a) **A Fleet Role:** One role for the entire fleet of units
   b) **A Unit Specific Role**: A Unit specific role (only one per unit)
5. When the role has been created, select it in the top grid.
6. Click the [Add new User] button in the lower grid, to assign a user to the selected role.

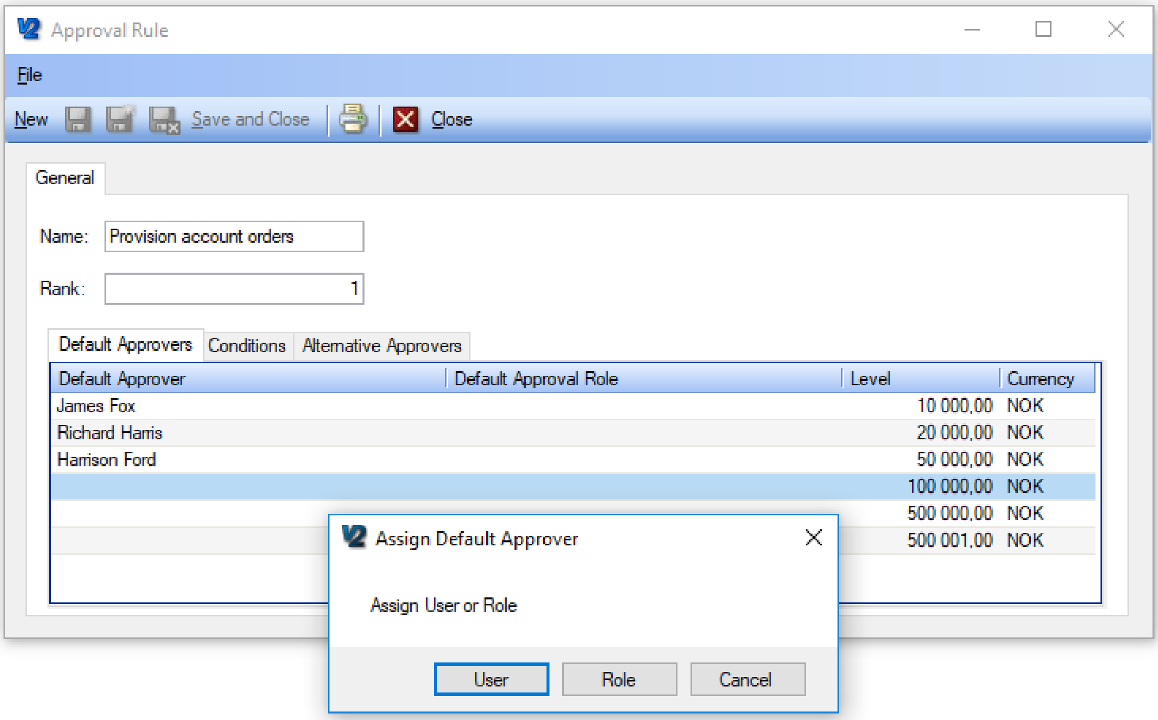


7. Select the user that should hold the role, by clicking the [...] button in the Name field.
8. Select the "Unit" where the selected user has the role. If you have added a "Fleet role", the unit field will be locked and say "Global" since the role is fleet wide.

How use a "Role" in an approval rule?

1. Create at least one Role as described in the item above.

2. Once at least one role has been created, you will be given the option to either select a user or a role, when assigning approvers to an approval level. (Ref. item: 6)



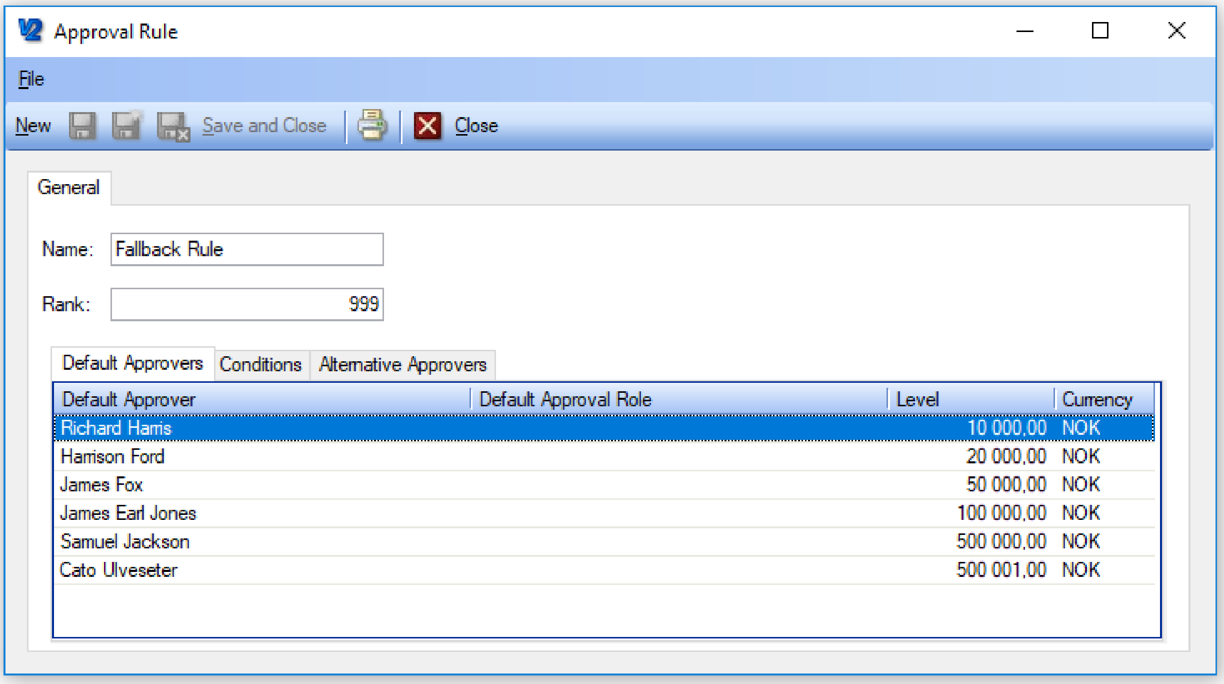
3. Select [Role] and select the role that should be the approver for the level.
4. When using the [Check rule] you will see that any users assigned to a level based on a role will show the role in the “Role” column in the simulated approval.

Tips & Tricks

The system will not make sure that all levels have an approver of its own accord. So, in order to avoid ending up with an order with no final approver, the first rule you create should be a “catch them all rule”, which will ensure that all levels have an approver if all other rules fail to populate the levels.

How to add a “catch them all” rule.

1. Click the [Add New Rule] button in the top grid menu bar
2. Give the rule a name
3. Enter a rule rank. The rule “Rank” will represent the order rules are considered when looking for a level approver, the lowest rule rank is considered first and the highest last. Enter a high value to ensure that this will be the last rule to be considered
4. Double click each of the approval levels and select a specific “user” or “role” in the grid on the “Default approvers” sub tab. (roles will be described later in this document)
5. Since this “catch them all” rule should catch all orders we can leave the “condition” list on the “condition” sub tab empty. This will ensure that if an order should pass through all the rules and one of the approval levels does not have an approver, the missing level will be assigned an approver from this rule.



6.
7. Click **[Save & Close]** for the rule
8. When you have created the "catch them all" rule you have entered the minimum requirement for the rule-based approval matrix to work. With this one rule, the rule-based approval matrix is in principal mimicking the functionality available in the older "approval level matrix" that has been available in TM Master.

How to "rank" rules to make them perform as expected?

Ranking rules correctly is important to get the rule-based matrix to behave as you would like.
Here are a list of key elements you should have in your mind related to the rules:

- **One of each condition type specified for a rule, must be met in order for the rule to be utilized.**
- **Rules are assessed based on the rules ranking (lowest rank number will be assessed first)**
- **Once a rule has assigned an approver to an approval level, later rules will not change the approver for that particular level.**

How to configure the "Change control" on approved orders?

1. **Configure and Activate the "Rule based Approval Matrix" (ref previous chapters)**
   Its highly recommended to configure the rule-based approval matrix prior to activating it. The "Change control" currently requires the "Rule based approval matrix" to be configured to decide which user will need to approve a value increase exceeding a user's grace value.

2. **Enable the "Change control on approved orders"**
   This will activate the change control on approved orders, any changes made to approved orders will need to be approved before they are implemented.
3. **Configure any user groups "Grace value" (optional)**
   This will allow the members in a specific user group to approve a specified limited value increase themselves without the need for a second approval. A grace value is typically granted to the purchasers, to allow smaller order value changes. But this is not required.

How to enable "Change control on approved orders"?

1. Click [System] → [Settings] → "Order settings" tab → "General" sub tab.
2. Locate the settings group called "Workflow"
3. Tick the "Enable Change approval"

How to configure a user "grace value"?

In relation to the "Change Control" function the grace value is the upper limit a user is allowed to increase an orders value with, after it has been approved, before the increase will need a re-approval to be committed.

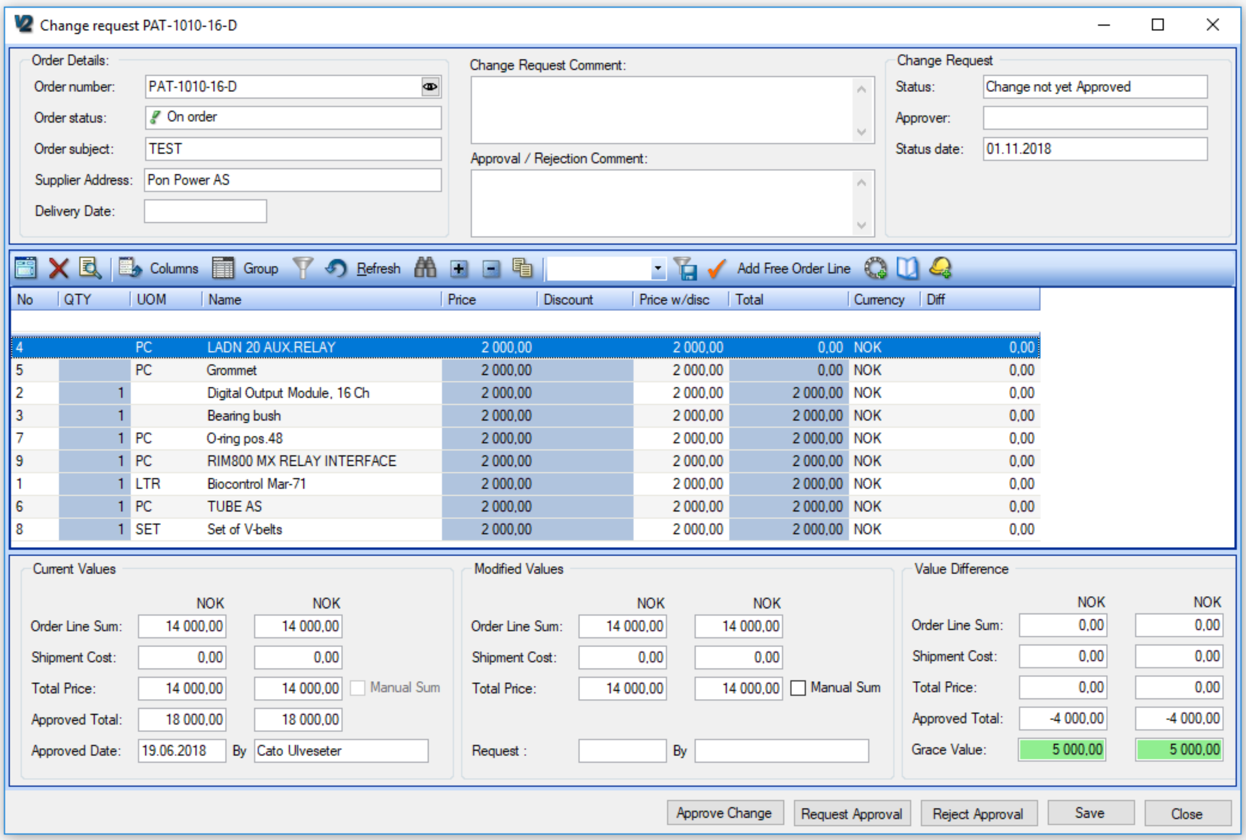
1. Click [System] → [Settings] → "Order settings" tab → "General" sub tab.
2. Locate the settings group called "Workflow"
3. Click the […] button next to the setting "Enable Change approval".
4. Double click a user group that should have a grace value and enter the amount limit.

As long as the order value changes are within the set grace value, the user is allowed to commit changes to the order value. If the changed amount exceeds the limit, the user will need to get the change approved before it is committed.

How to use the "Change control" function?

Once the "Enable Change control" is turned on, any alterations made to an approved order's value will need to be either confirmed by purchaser (if within user grace value) or approved before the order is updated. Please note that the function only applies after the order has been approved.

1. Open an Approved order
2. Click on the "Order Lines" tab and click the [Edit button]
3. After order has been approved, the following dialog should appear.



4. This form contains the following elements and functions. Starting at the top left corner.

   1. **General Order details**
      - Order number
      - Order status
      - Order subject
      - Selected supplier name
      - Delivery date

   2. **Change request details**
      - Change request comment
        This field may be used to communicate to the approver, about why the change was made. It is also written to the order history as a comment to the change.
      - Approval/Rejection Comment
        This field will show any reason stated by the approver, either for the change approval or rejection.
        It is also written to the order history as a comment to the change.
      - Change request status that can state:
        - Change not yet Approved
        - Change Awaiting approval
        - Change Approved
        - Change Rejected
      - Approver: Name of the user who approved\rejected the change

- Status date: The date when the current status was set.

3. Order line grid

This grid allows the user to enter the desired changes to the order lines.
If a value has been changed it will be indicated by the field's background colour.
(Red = Increased, Green = Reduced)

- Quantity
- Item Price
- Discount
- Order line total

New items can also be added using the add buttons in the grid menu bar.

- Add "Free text order line"
- Add "Spare part" item
- Add "Catalog" item
- Add "Service Item" (if this option is turned on in settings)

4. Current Values section

This section shows the current order values both in order currency and in unit currency

- Order line sum
- Shipment cost
- Total Price
- Approved total (Approved total can differ from current total, when a user with a grace value updates the order value within the user's grace value limit, the order value will be increased but it will not update the order's approved value)
- Approved date
- Approving user name

New items can also be added using the add buttons in the grid menu bar.

- Add "Free text order line"
- Add "Spare part" item
- Add "Catalog" item

5. Modified values section.

This section shows the new values for the order if any changes are made to the order lines, also both in order currency and in unit currency.

- Order Line sum (This is the order lines in the grid above, grand total calculated)
  If a change has been made to the total, the fields will indicate this with a red background
- Shipment cost
  This field will allow change of the shipment cost
- Total Price
  This is the order line total + shipment cost, this can be modified directly by ticking the [ ] Manual Sum check box. This is in case a lump sum update to the order is required.

- Request: Will show the name of the user who has sent a change request and the date of when it was done.

6. **Value difference section**
   This section will show the difference between the current values for the order versus the modified values. It also shows the user's "Grace value". If the background colour is green, the user will be able to commit the changes without a new approval. If the colour is red, the user will need to send a request for approval in order to get the changes committed.

Functions in the order change dialog.

[Commit Change]

If the difference between the approved value for the order and the new modified value is within the user's grace value, the user can click the [Commit Change] button. The changes will then be made to the order value. It will not update the order's "Approved value", so if the user makes another adjustment to the order value, the system will always compare the increase in relation to the "approved value" and not the order's current value.

[Send Approval Request]

If the order value changes exceed the user's grace value, the user will need to send an "approval request" for the change to be applied to the order. Clicking the [Send Approval Request] button will send a request for approval (as an external or TM Master internal e-mail) to the appropriate user according to the rule-based approval matrix. It will only notify the final approver, and not all the sub approval levels.

[Approve change]

If a user opens a change request where they have the authorisation to approve, the [Approve change] button is available. The Rule based approval matrix is utilized to determine if a user is allowed to approve or not. Both the default approver for the level in question and any alternative approver level may approve a change request. When a change request is approved, change is applied to the order value and the Approved total is updated.

[Reject Approval]

If the requested approver does not agree with the requested change, the approver can click on the [Reject approval] button. The approver will then be asked to state a reason for the rejection, which will show up in the "Approval Rejection" comment field. The requested change is then of course not applied to the order.

[Save]

If the user is not yet ready to commit changes to the order (for example if they get half way through the changes and then need to handle something else immediately), it is possible to save the progress of the change request so far, so as to be continued later. To open a saved "change request" simply click the [Edit] button in the order again, and the saved changes will appear. Each order may have only one "saved" change record at the time.

Change request columns in the order overview grid

- **Pending Change requests.**
  All orders with a pending change request will be listed in this column
- **Approved Change requests.**
  All open orders (Not finished) that have an approved change request will be listed here. Only the last request is used to determine which column it should be shown under.
- **Rejected Change requests.**
  All open orders (Not finished) that have a rejected change request will be listed here. Only the last request is used to determine which column it should be shown under.

How to approve a request for change?

This chapter will describe the procedure of approving a request for change from the approver's view. The process will usually start with an email being received, stating that a purchaser has requested an order value change approval. If this email is being sent to the user's external email or to the internal TM Master e-mail, depends on the individual user's user settings. Under [My Place] → [Preferences] → "General" there is a field for the user's e-mail. If this field is left blank, requests will be sent to the internal email client, if the user's email address is entered in this field, the notification will be sent to the external email account.

1. Open TM Master → [My Name Place] → Overview
2. Under the section called "Orders Awaiting My Approval" the following items can be found. Clicking any of these will show a list of the orders in question in a grid below.

Orders Awaiting My Approval	1
Orders Awaiting My Approval	1
Orders Queued For My Approval	0
Order Changes Awaiting My Approval	0
Last Orders I Have Approved	22

3. Click the "Order Changes Awaiting My Approval". A list of all the requests awaiting the current user should appear in the grid below.
4. Double click the "Request for approval"
5. Review the change request. The change request form is described earlier in this document.
6. Approve / Reject the change request.
   6.1. **If changes are accepted**, user may add an "Accept comment" and click the [Approve changes] button. The approved order value is then updated.

6.2. **If changes are not accepted**, user can click the [Reject Request] and then state a reason for the rejection.

7. Done.