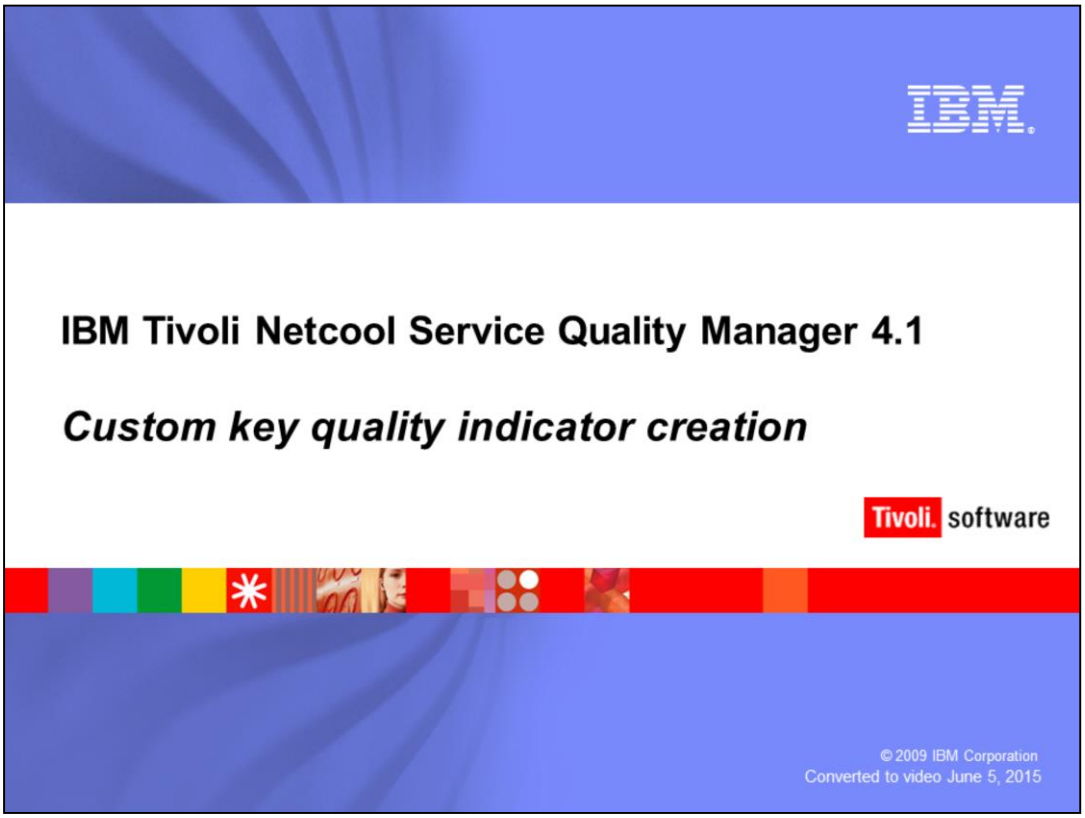
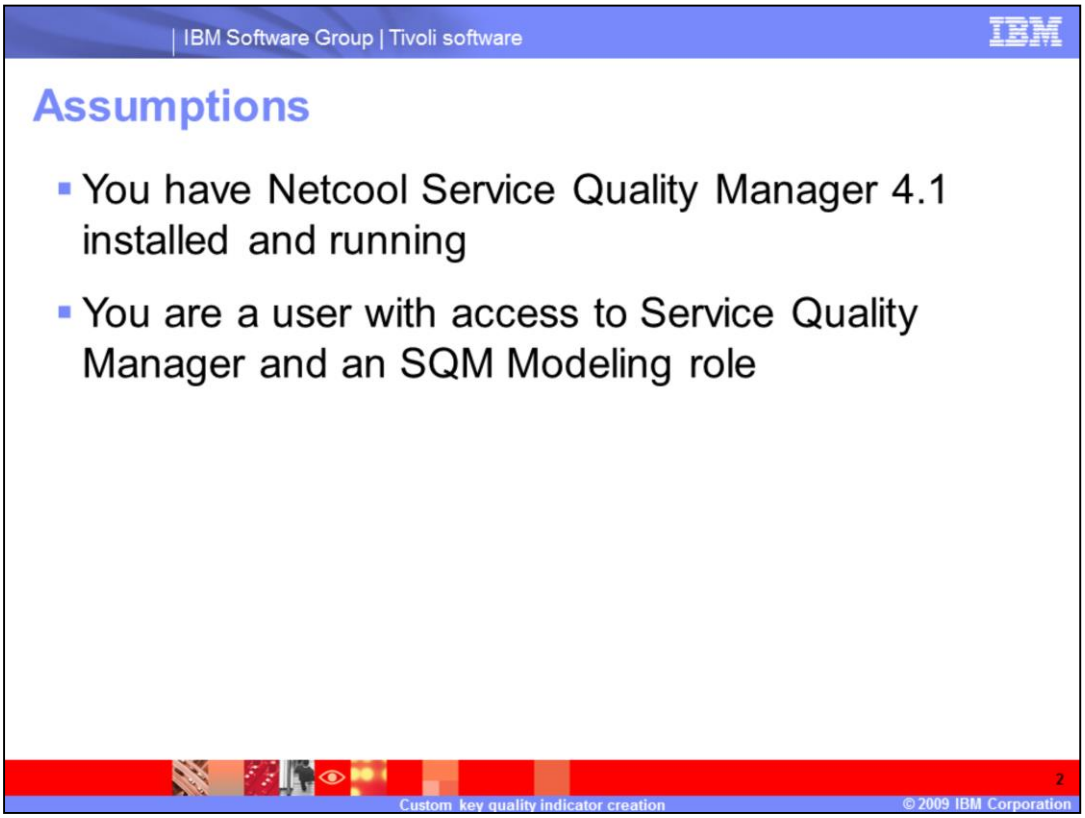


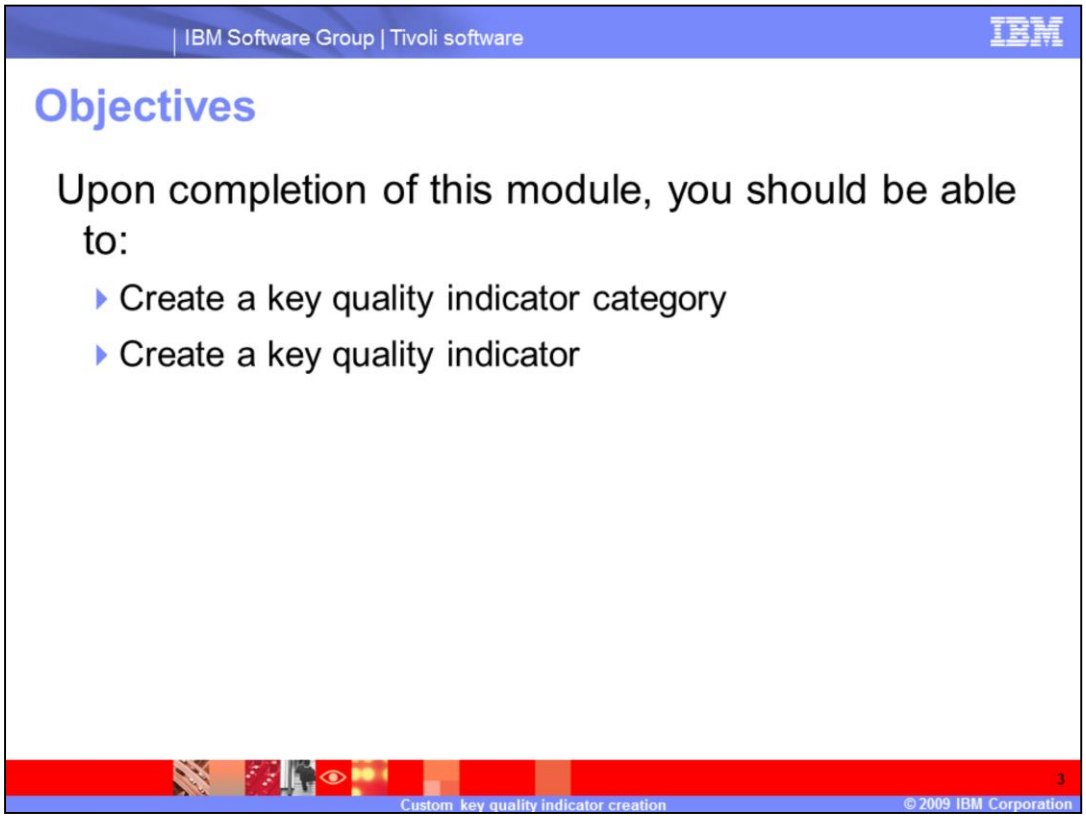
IBM Tivoli Netcool® Service Quality Manager 4.1: Custom key quality indicator creation.

This training module is for Netcool Service Quality Manager 4.1, custom key quality indicator creation.



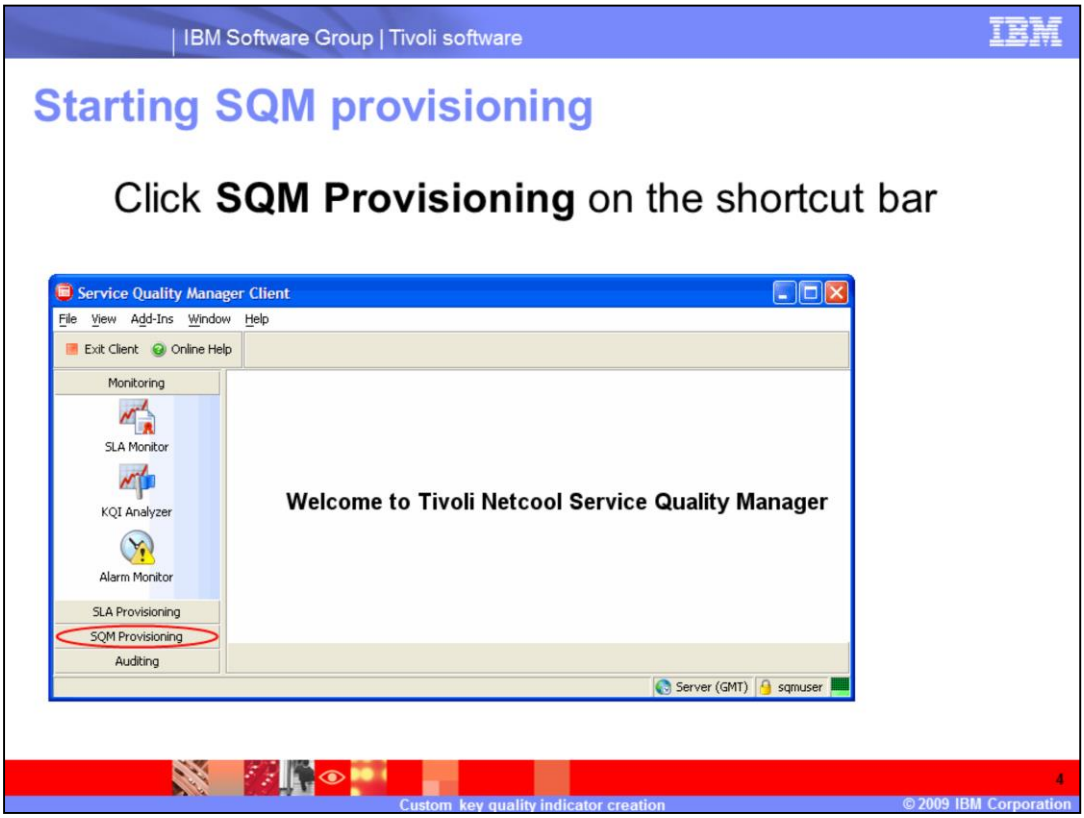
Assumptions.

The assumptions are that you have Netcool Service Quality Manager 4.1 installed and running and that you are a user with access to Service Quality Manager and an SQM Modeling role.



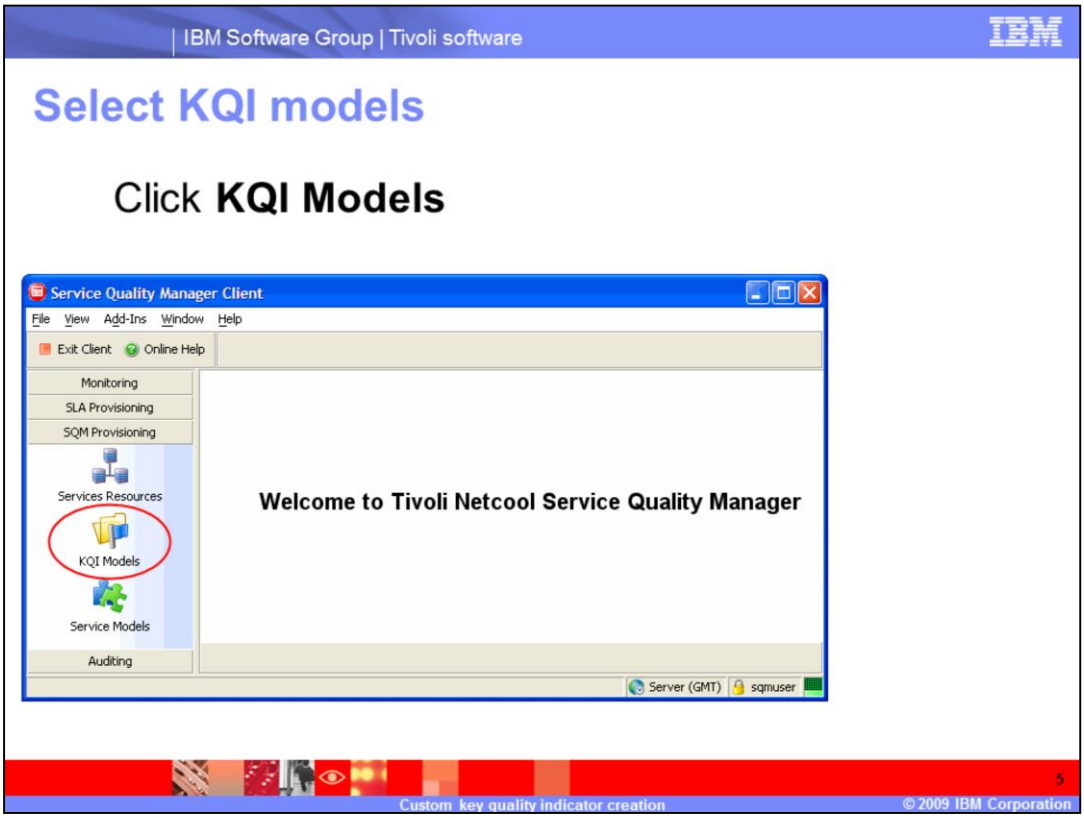
Objectives.

Upon completion of this module, you should be able to create a key quality indicator category and create a key quality indicator.



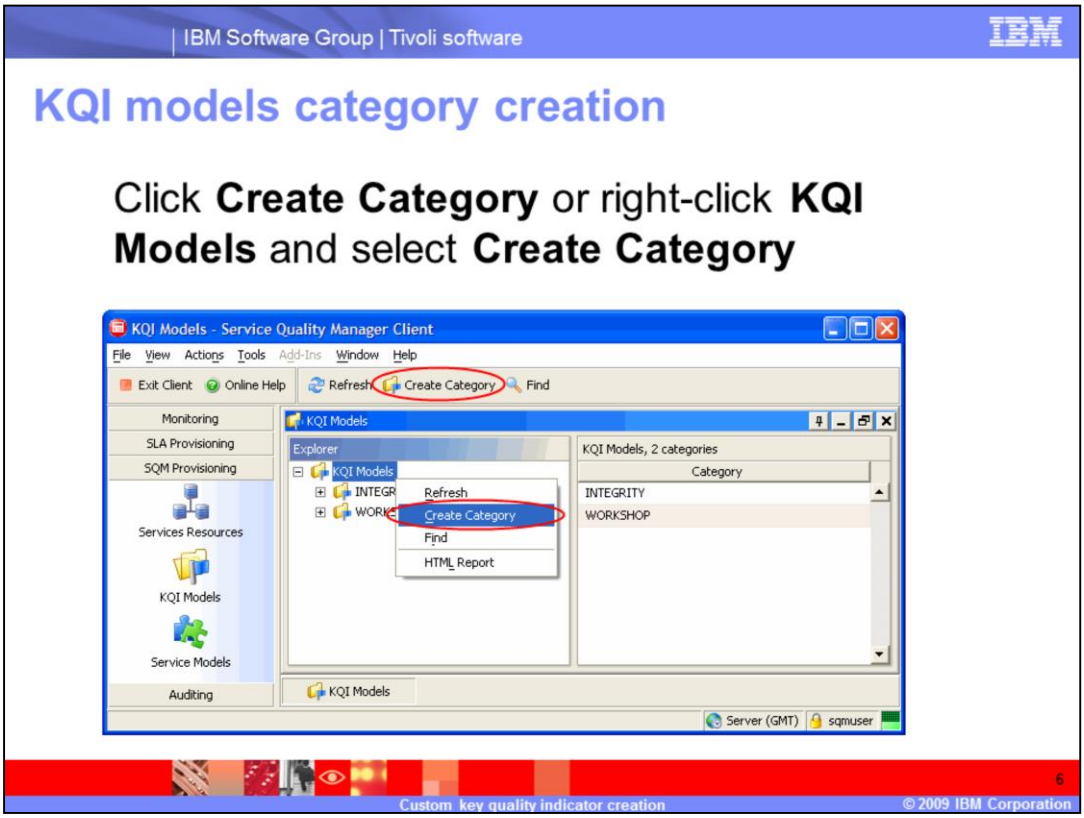
Starting SQM provisioning.

Starting at the welcome page, click **SQM Provisioning** on the shortcut bar.



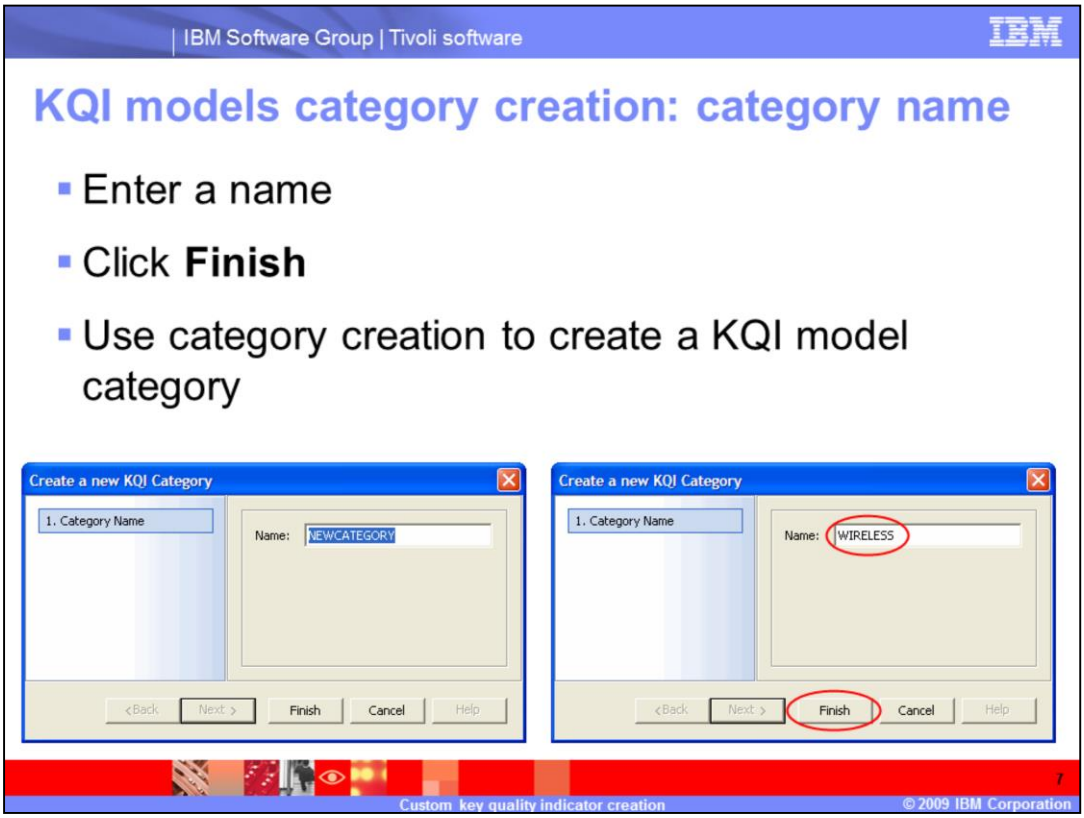
Select KQI models.

Click **KQI Models** in the **SQM Provisioning** menu.



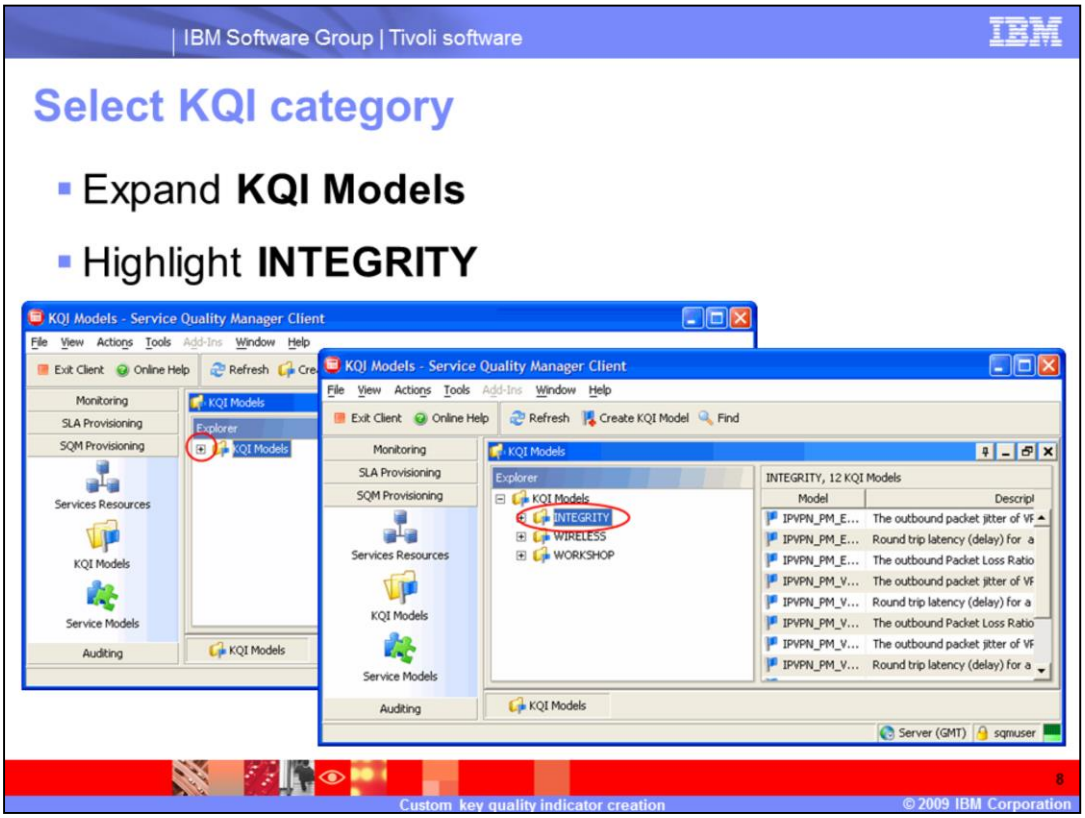
KQI models category creation.

Click **Create Category** or right-click **KQI Models** and select **Create Category** to create a KQI category.



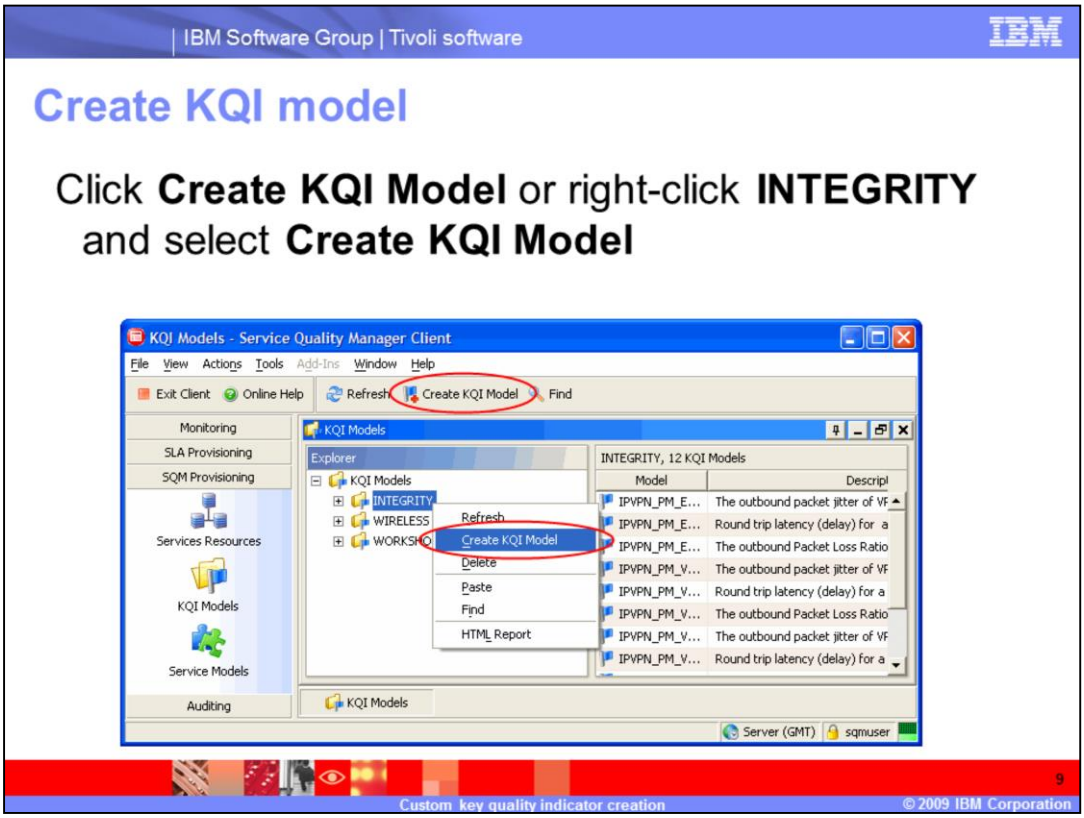
KQI models category creation: category name.

The default KQI Category name is **NEWCATEGORY**. You must enter the name of the category, for example, **WIRELESS**. Click **Finish**. This example of a WIRELESS KQI category shows you how to create a KQI model category.



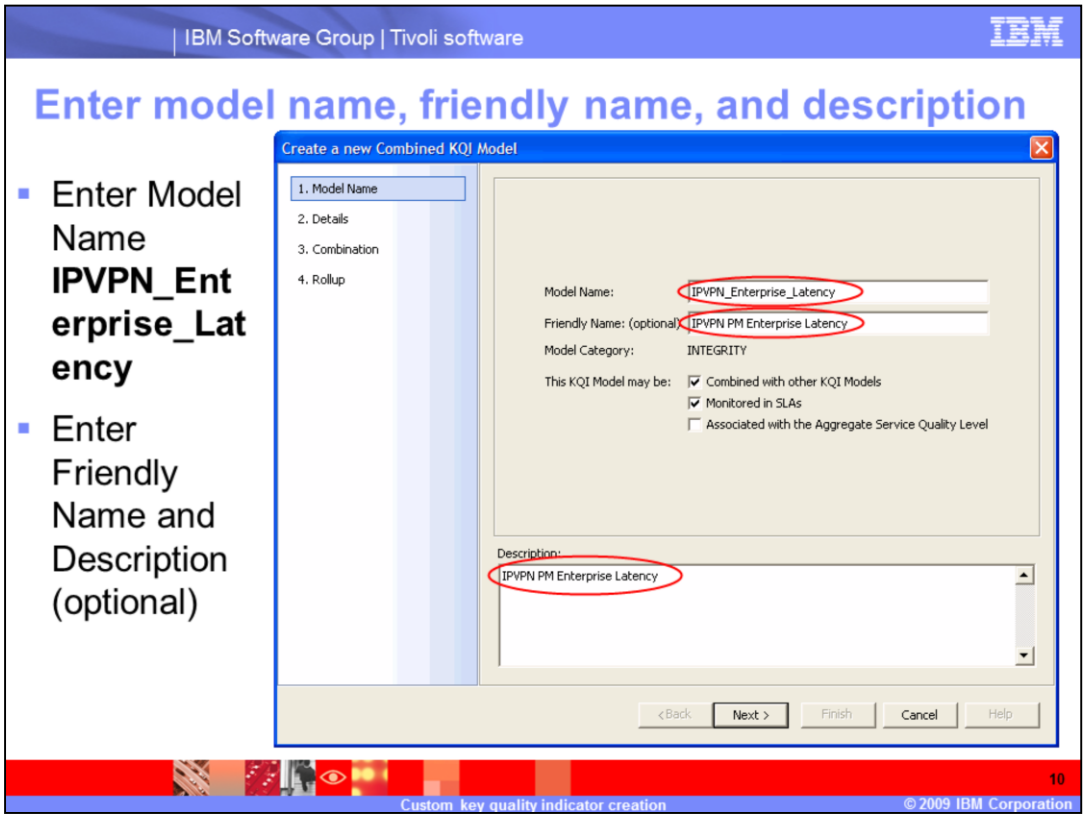
Select KQI category.

Expand **KQI Models**. Highlight **INTEGRITY**.



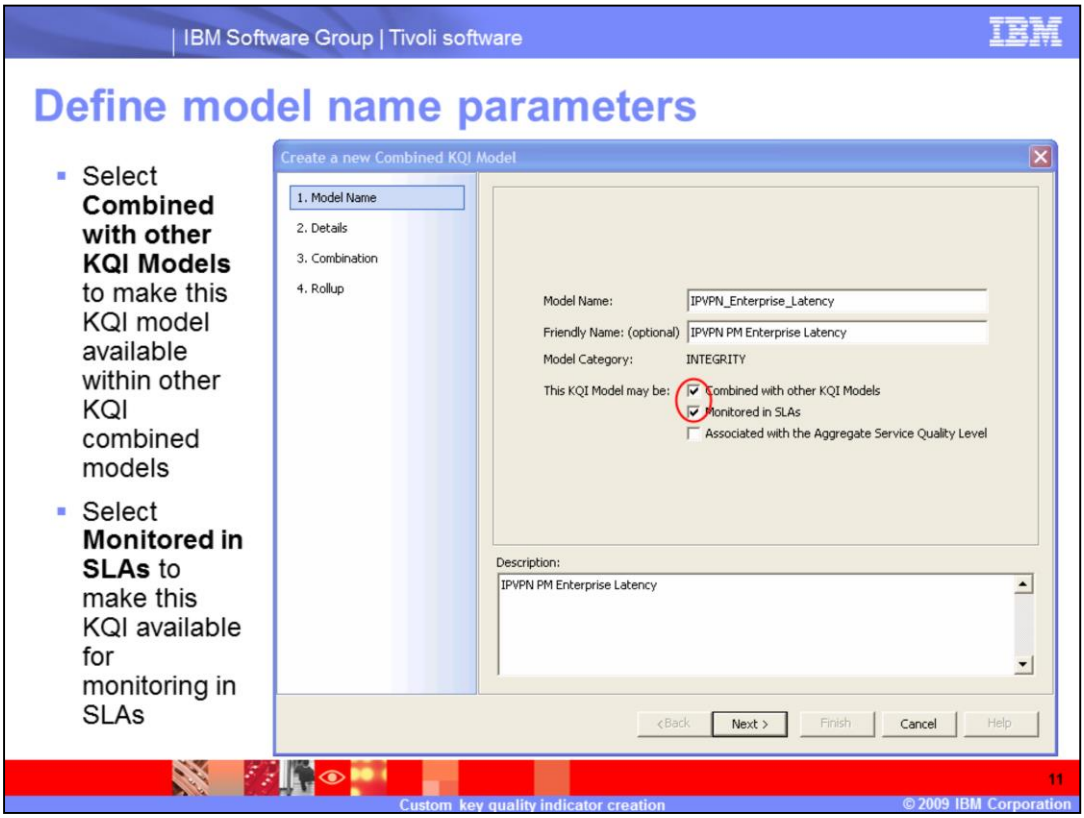
Create KQI model.

Click **Create KQI Model** or right-click **INTEGRITY** and select **Create KQI Model**.



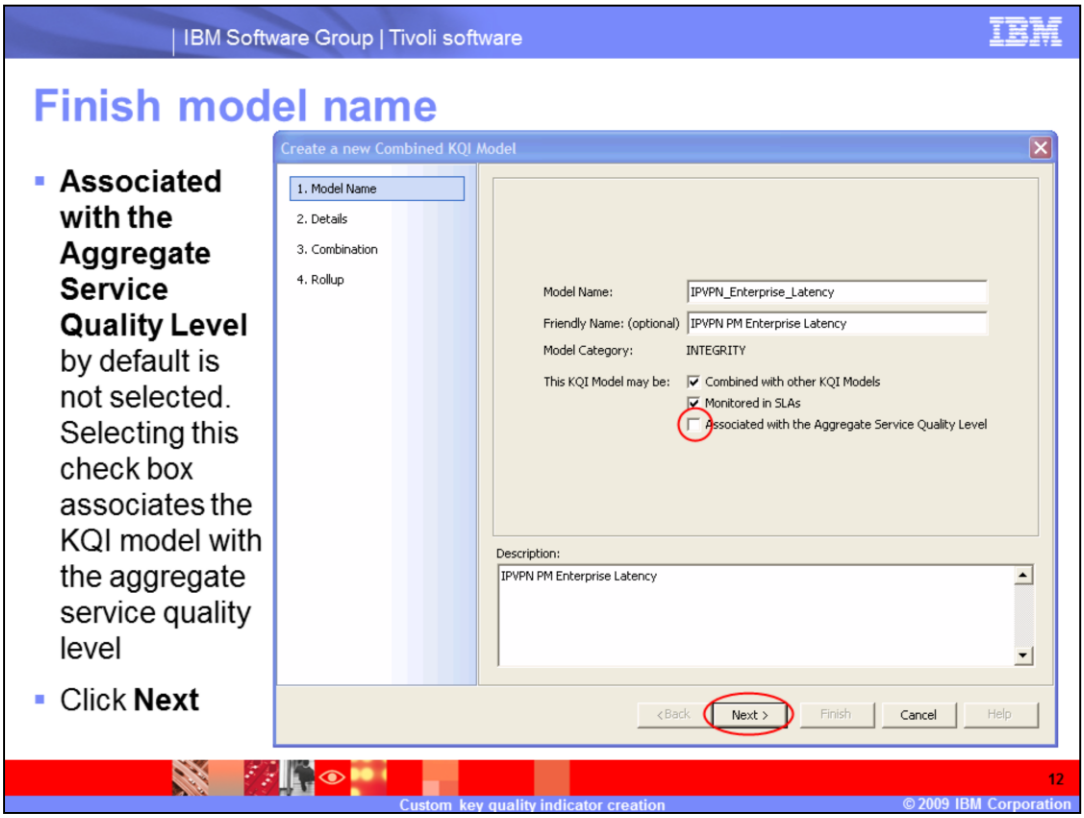
Enter model name, friendly name, and description.

Enter model name **IPVPN_Enterprise_Latency**. The Friendly Name and Description fields are optional. Enter IPVPN PM Enterprise Latency for the friendly name and for the description.



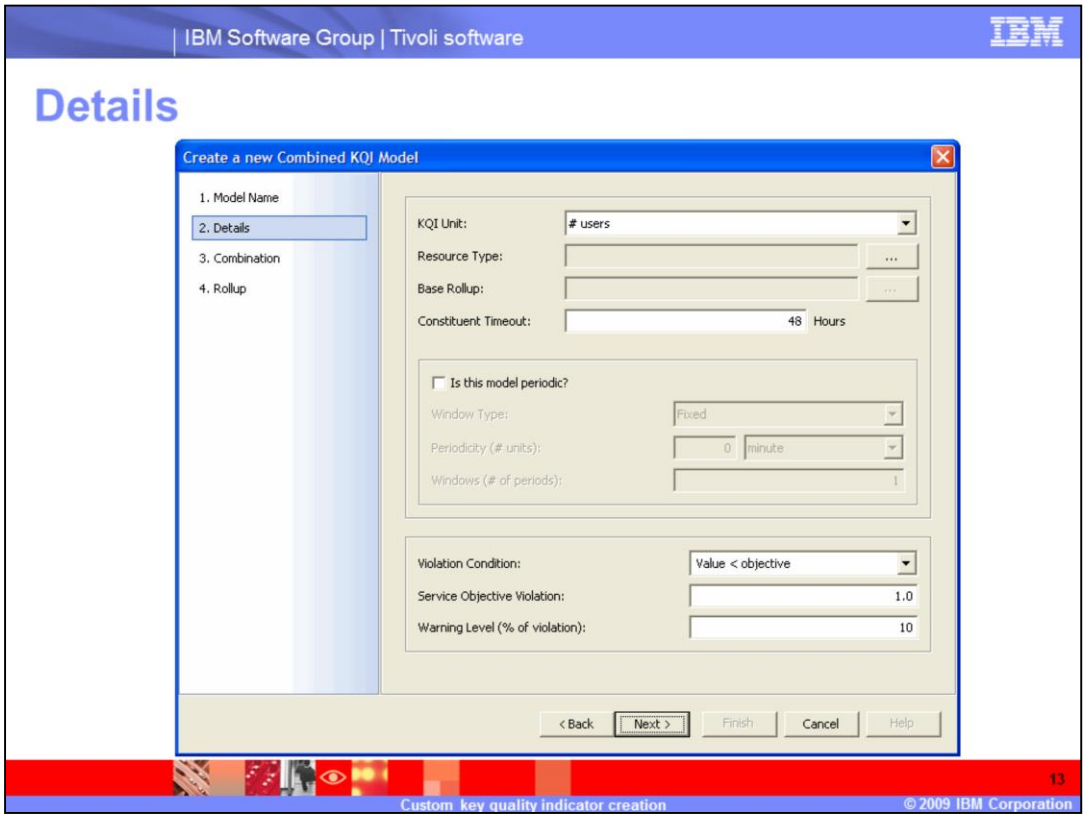
Define model name parameters.

Select **Combined with other KQI Models** to make this KQI model available within other KQI combined models. Select **Monitored in SLAs** to make this KQI available for monitoring in SLAs.



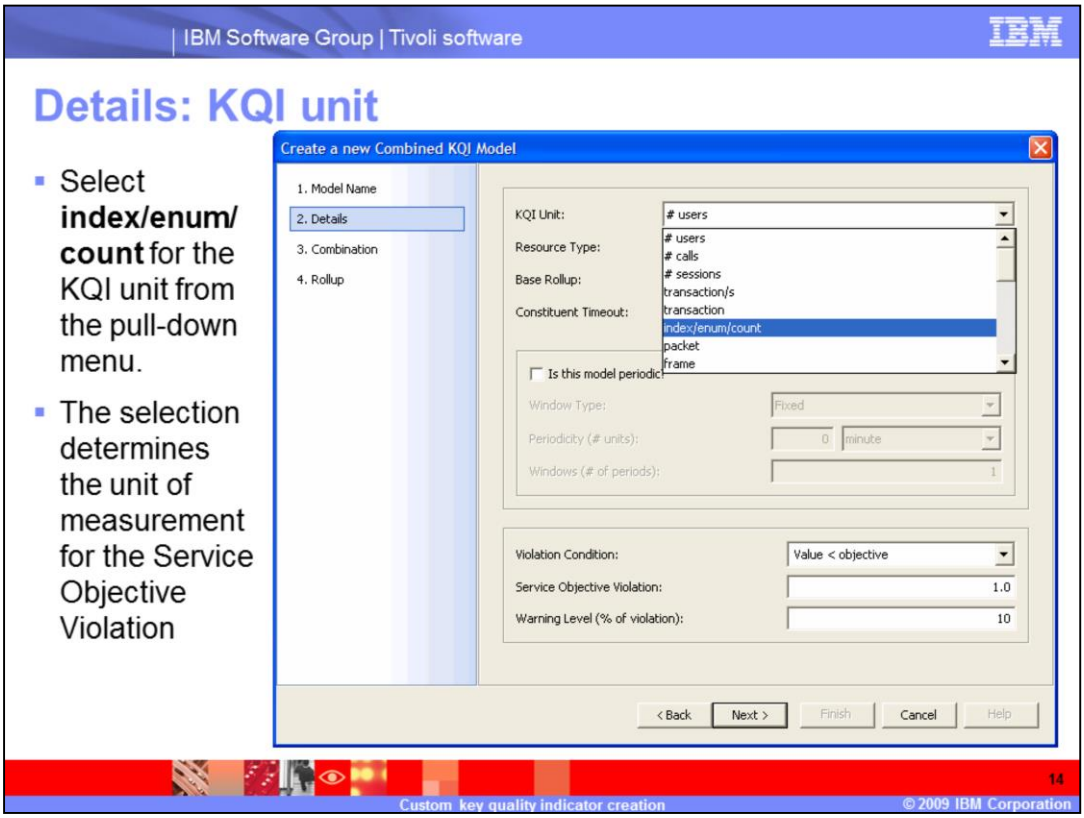
Finish model name.

Associated with the Aggregate Service Quality Level by default is not selected. Selecting this check box associates the KQI model with the aggregate service quality level. Click **Next**.



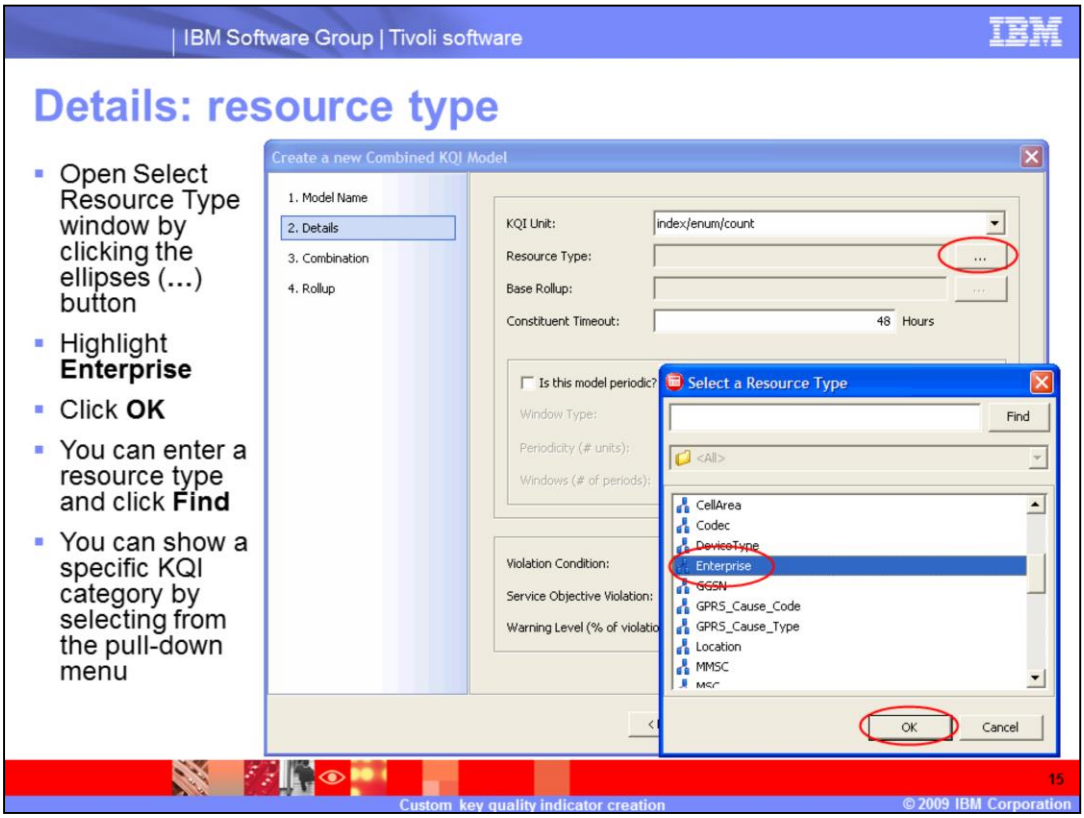
Details.

The Details window is displayed.



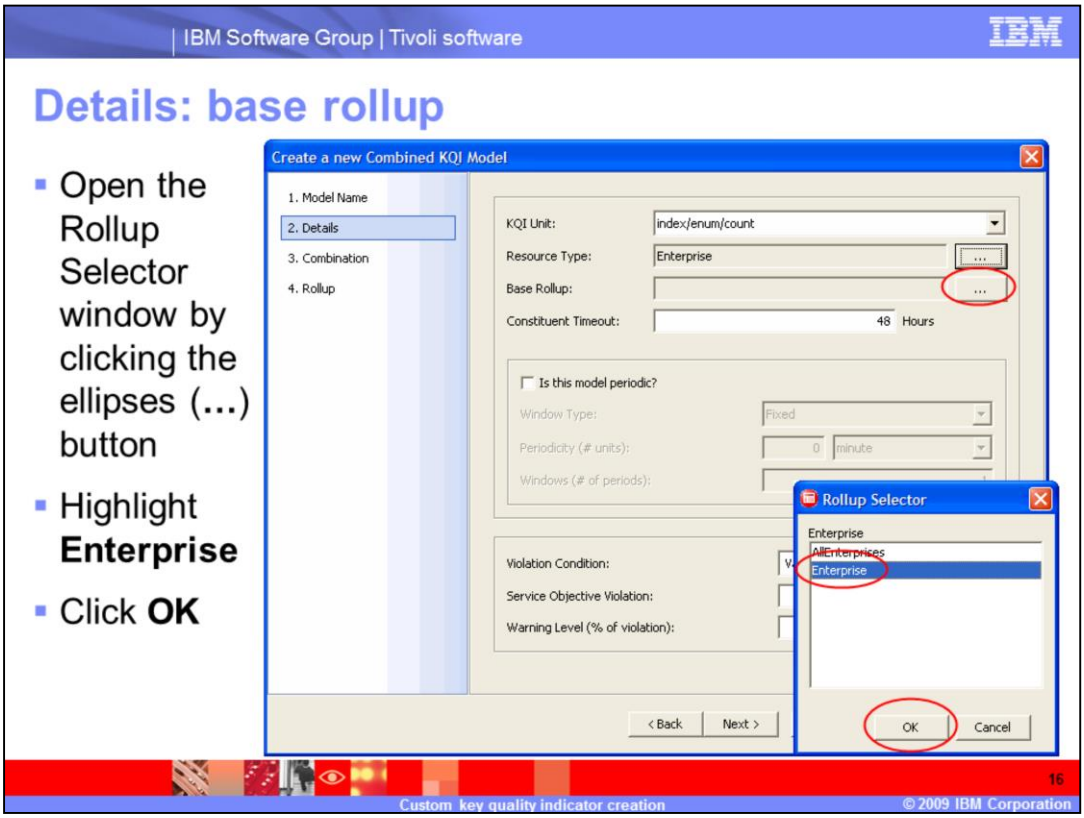
Details: KQI unit.

Select **index/enum/count** for the KQI unit from the pull-down menu. The selection determines the unit of measurement for the Service Objective Violation.



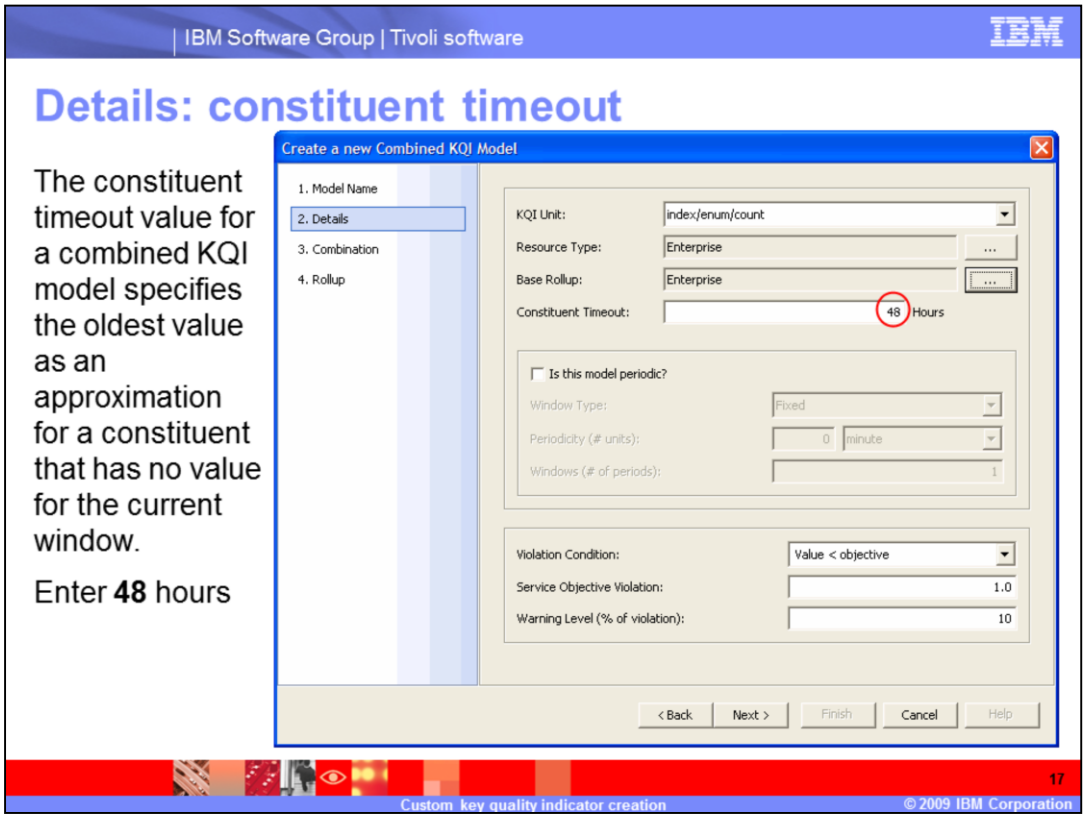
Details: resource type.

Open the Select Resource Type window by clicking the ellipses (…) button. Highlight **Enterprise**. Click **OK**. You can enter a resource type and click **Find**. You can show a specific KQI category by selecting from the pull-down menu.



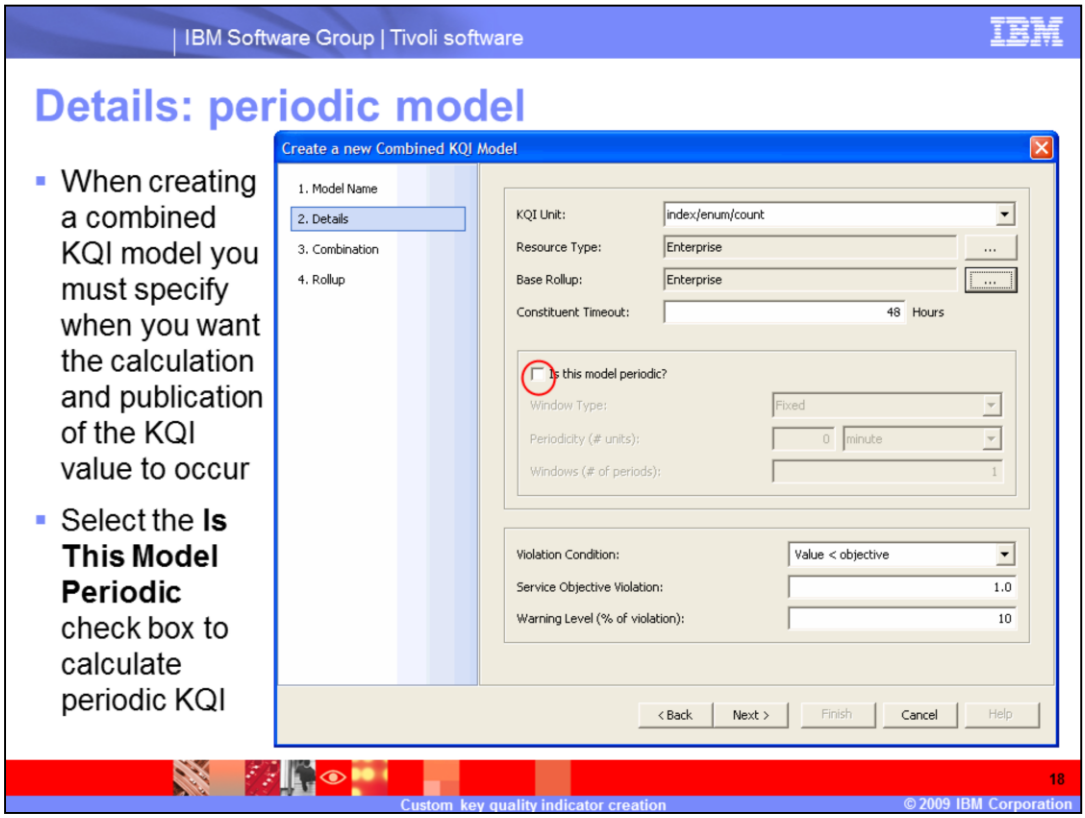
Details: base rollup.

Open the Rollup Selector window by clicking the ellipses (…) button. Highlight **Enterprise**. Click **OK**.



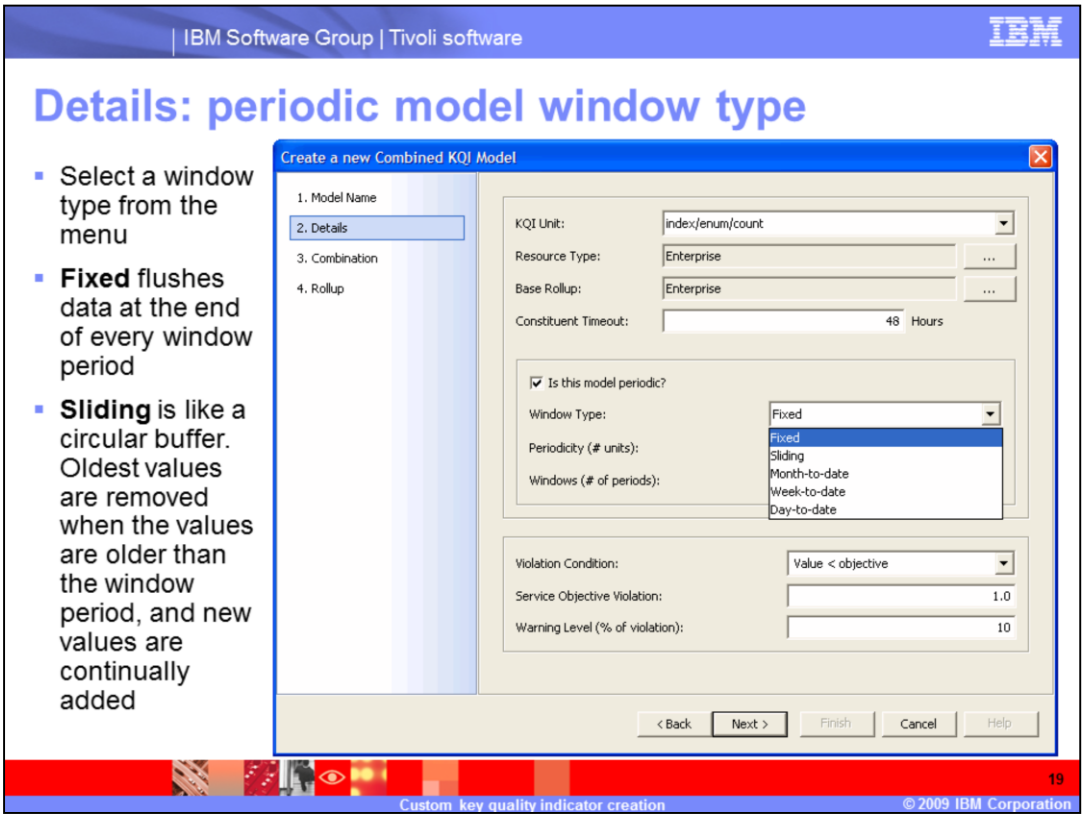
Details: constituent timeout.

The constituent timeout value for a combined KQI model specifies the oldest value as an approximation for a constituent that has no value for the current window. Enter **48** hours.



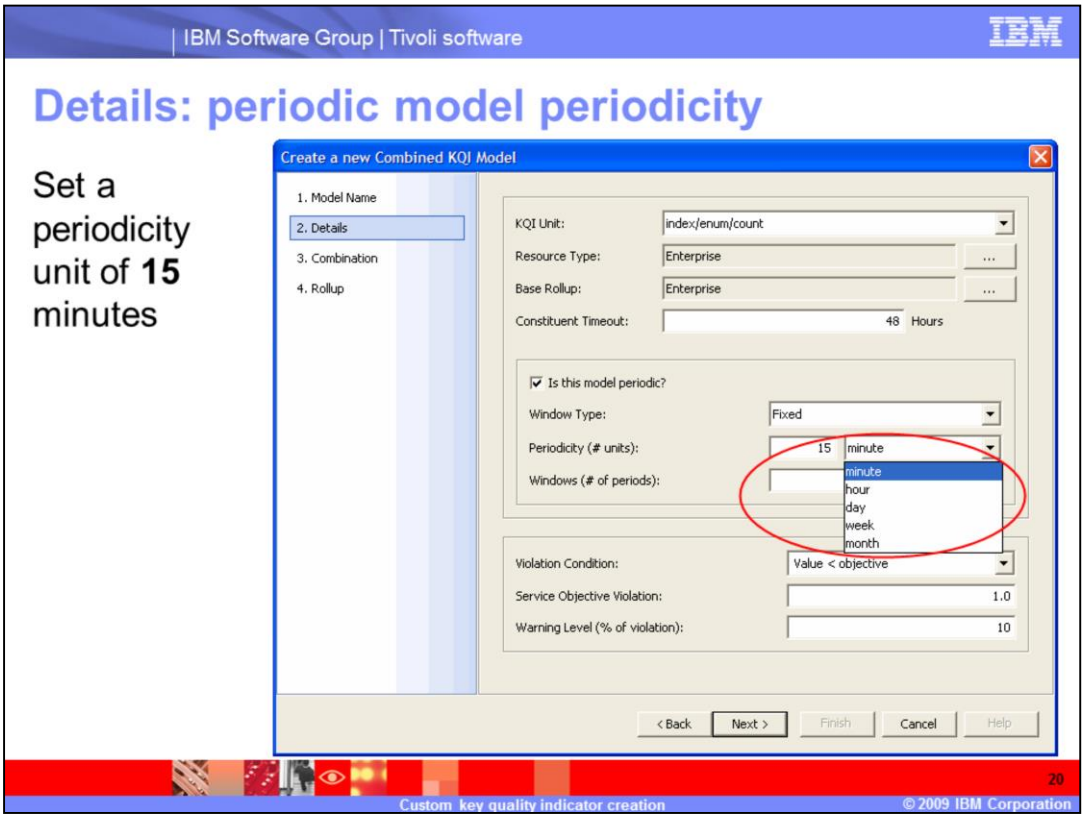
Details: periodic model.

When creating a combined KQI model, you must specify when you want the calculation and publication of the KQI value to occur. Select the **Is This Model Periodic** check box to calculate periodic KQI.



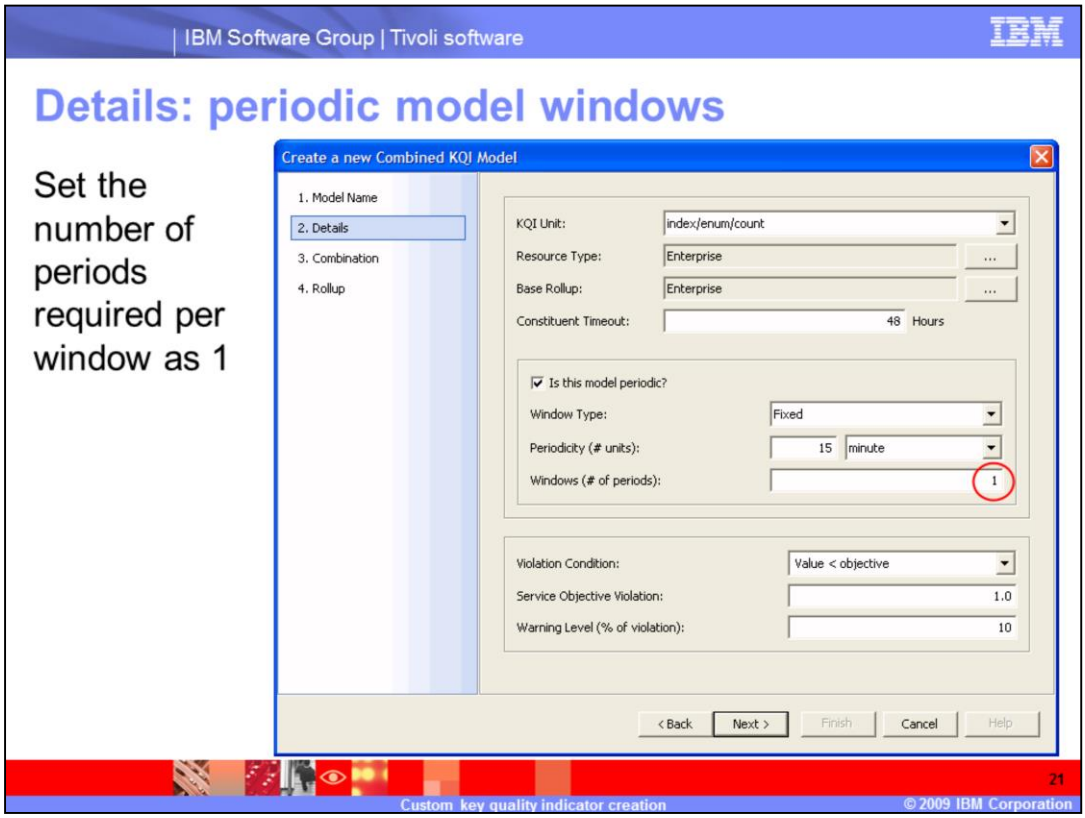
Details: periodic model window type.

Select a window type from the menu. **Fixed** flushes data at the end of every window period. **Sliding** is like a circular buffer. Oldest values are removed when the values are older than the window period, and new values are continually added. Month-to-date, Week-to-date, and Day-to-date are self explanatory.



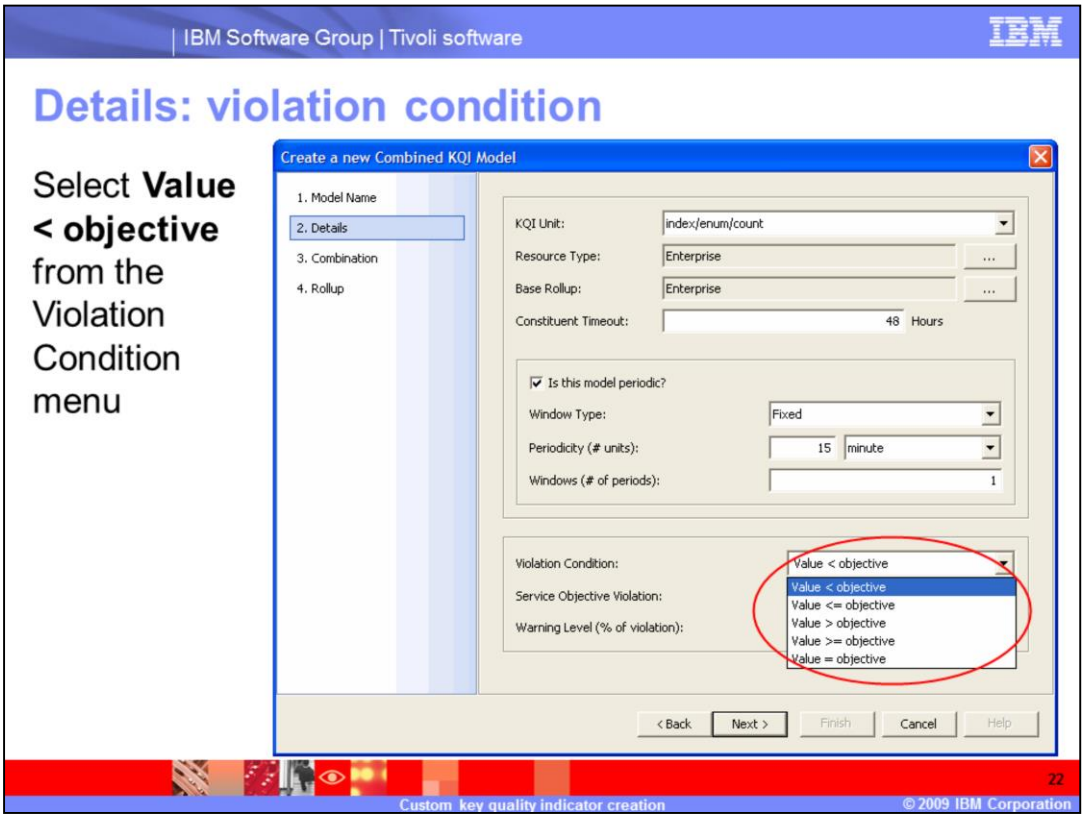
Details: periodic model periodicity.

Set a periodicity unit of **15** minutes.



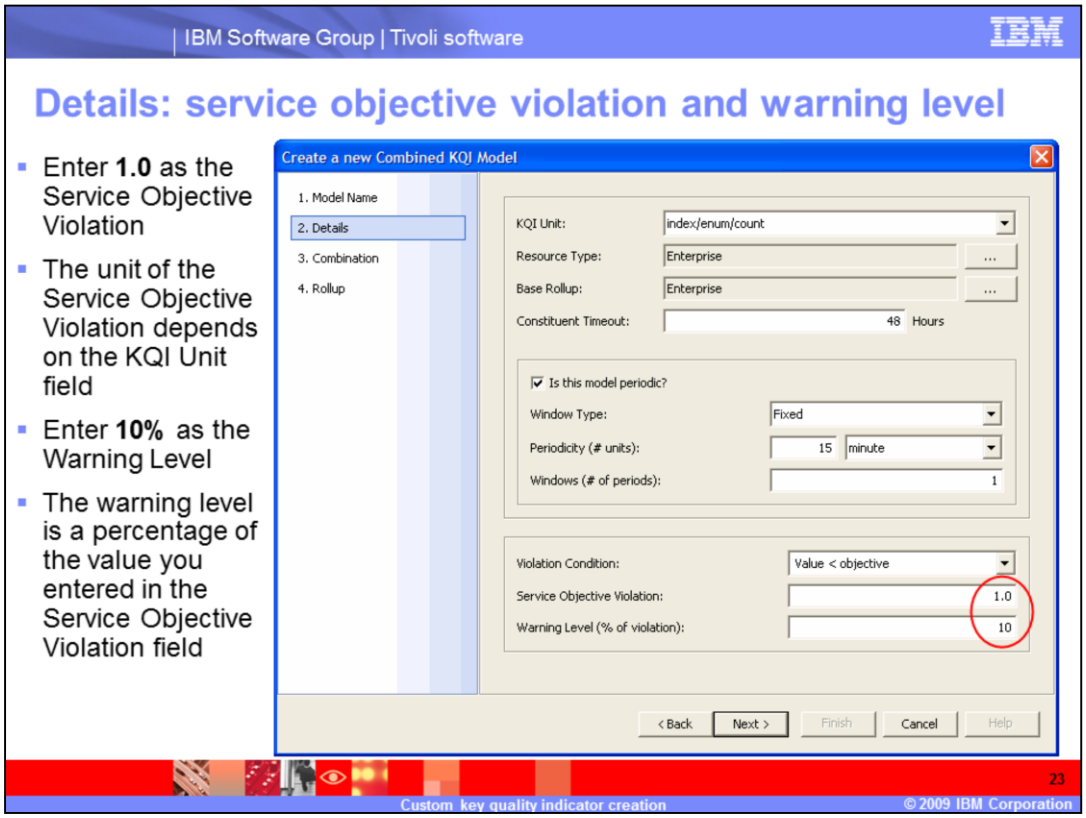
Details: periodic model windows.

Set the number of periods required per window as **1**.



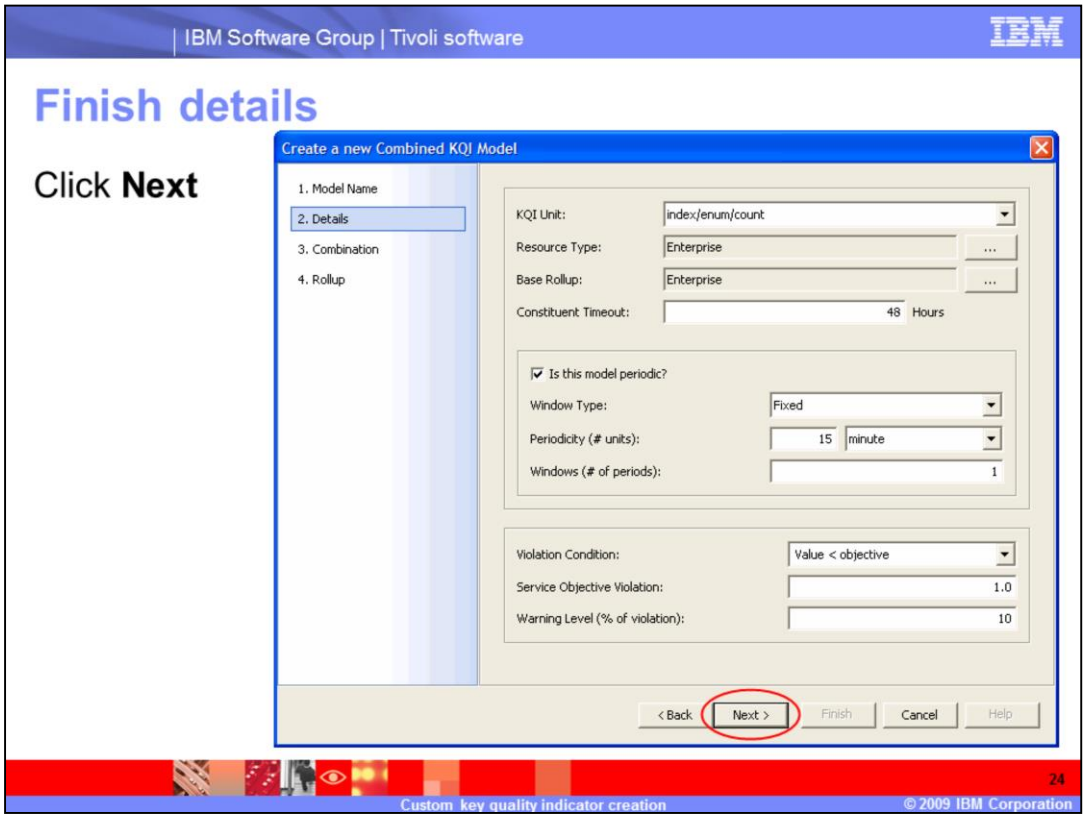
Details: violation condition.

Select **Value < objective** from the Violation Condition menu.



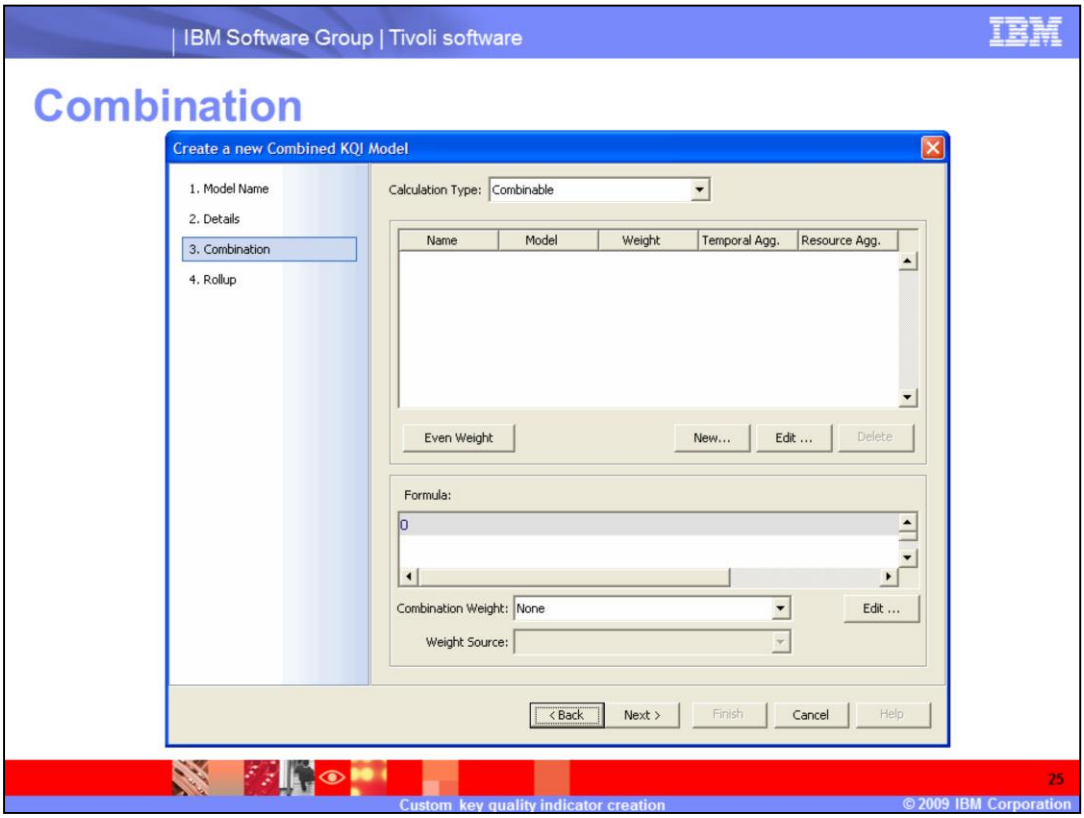
Details: service objective violation and warning level.

Enter **1.0** as the Service Objective Violation. The unit of the Service Objective Violation depends on the KQI Unit field. Enter **10%** as the Warning Level. The warning level is a percentage of the value you entered in the Service Objective Violation field.



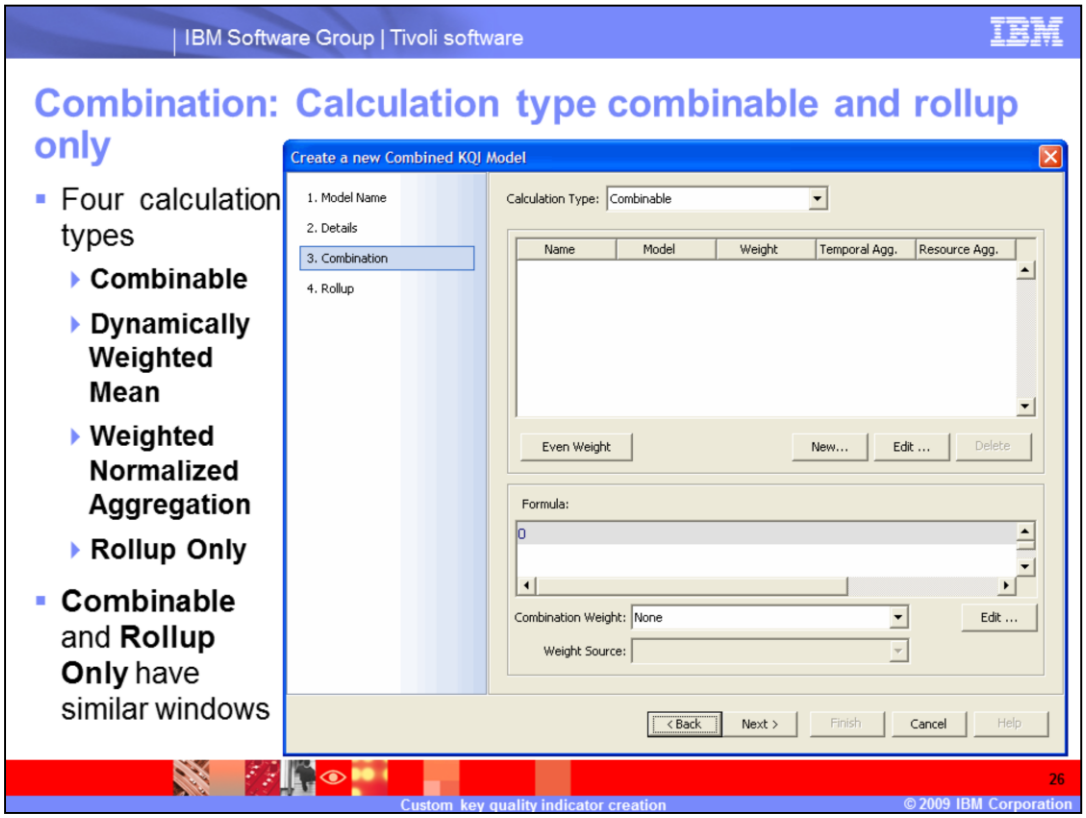
Finish details.

Click **Next** to finish the details section.



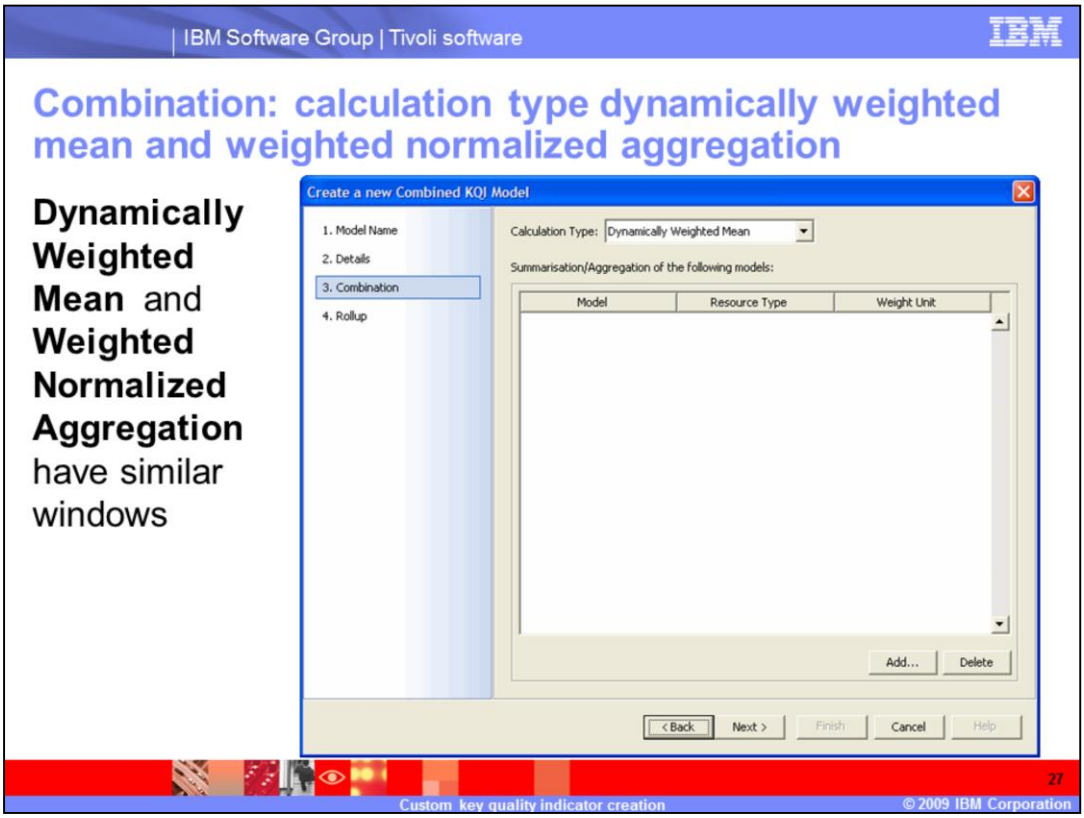
Combination.

The Combination window is displayed.



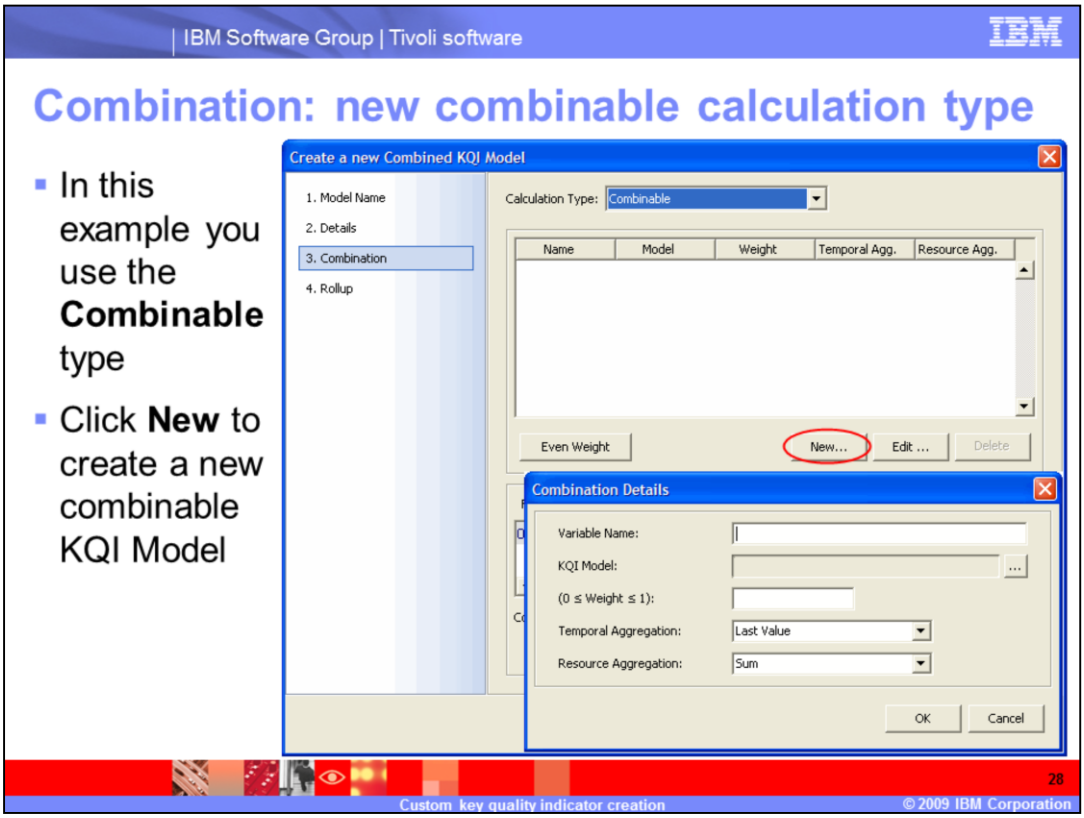
Combination: calculation type combinable and rollup only.

The four different calculation types are **Combinable**, **Dynamically Weighted Mean**, **Weighted Normalized Aggregation** and **Rollup Only**. **Combinable** and **Rollup Only** have similar windows.



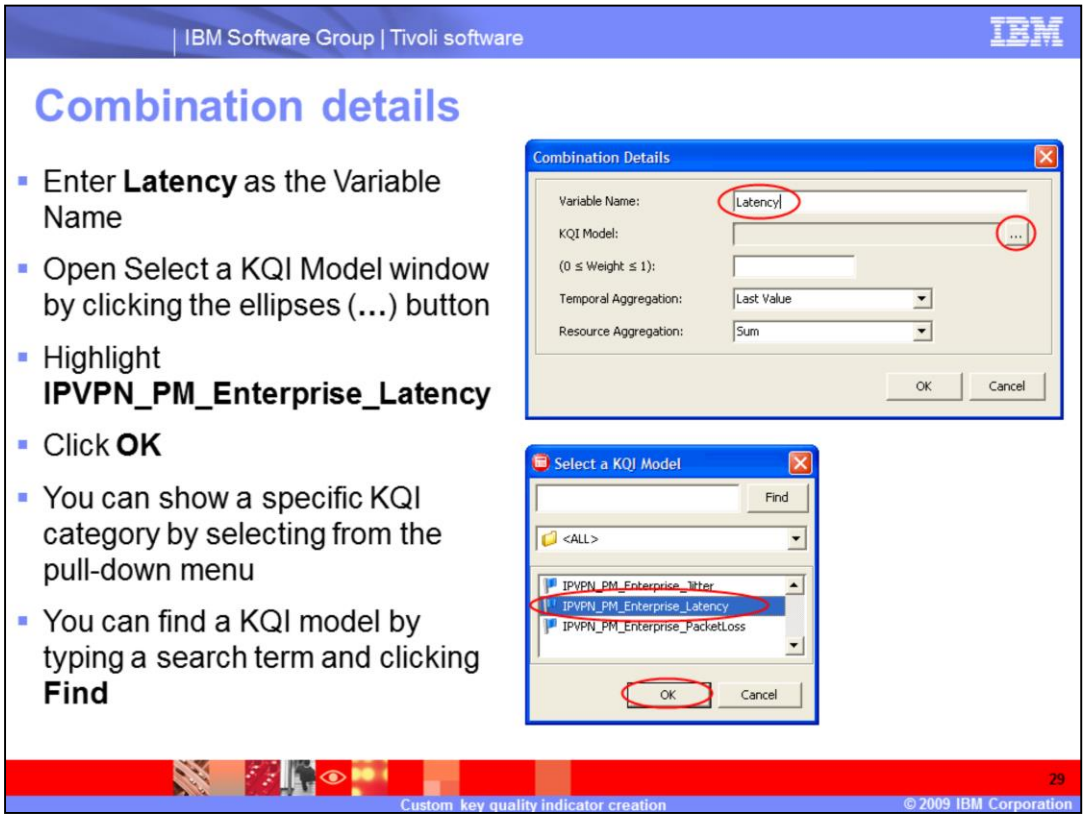
Combination: calculation type dynamically weighted mean and weighted normalized aggregation.

Dynamically Weighted Mean and **Weighted Normalized Aggregation** have similar windows.



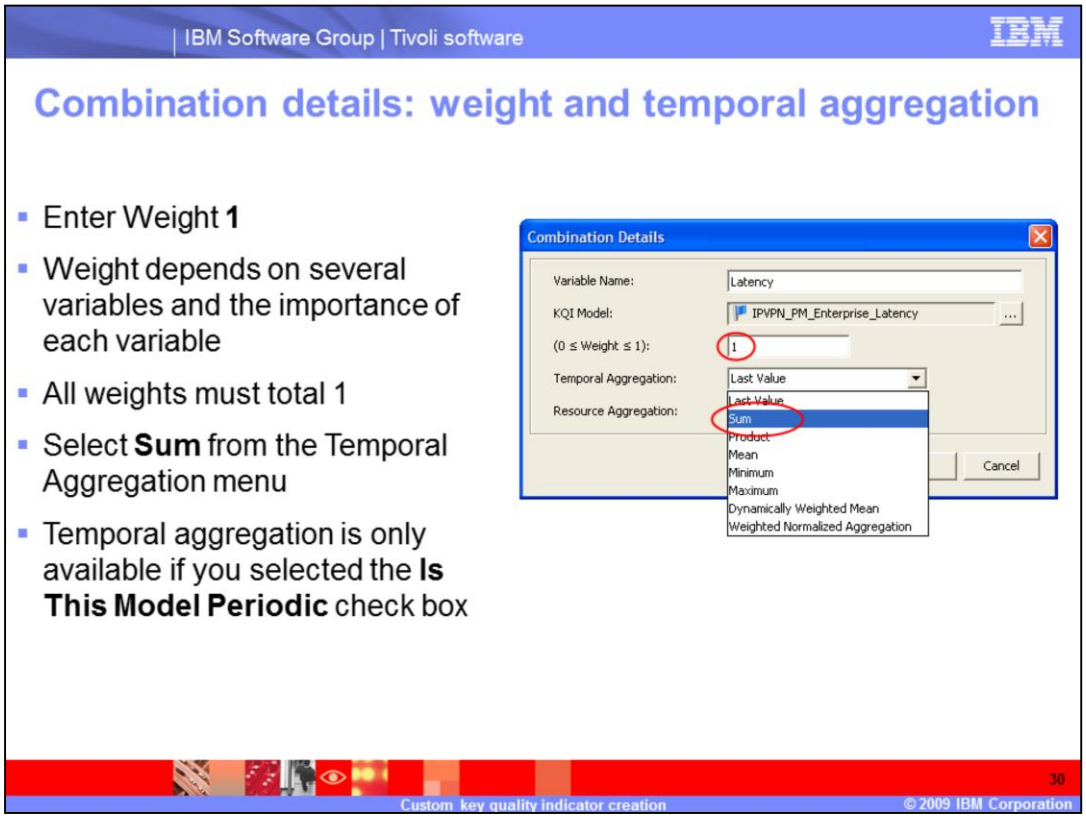
Combination: new combinable calculation type.

In this example you use the **Combinable** type. Click **New** to create a new combinable KQI model.



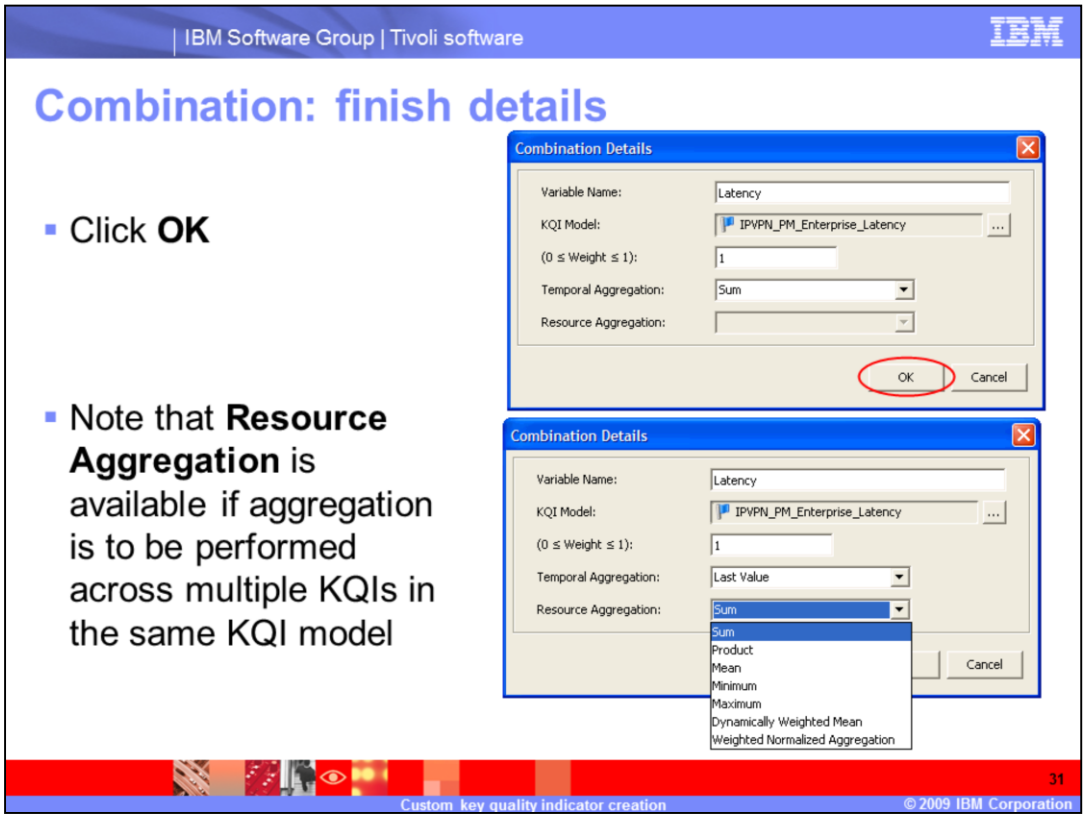
Combination details.

Enter **Latency** as the Variable Name. Open the Select a KQI Model window by clicking the ellipses (…) button. Highlight **IPVPN_PM_Enterprise_Latency**. Click **OK**. You can show a specific KQI category by selecting from the pull-down menu. You can find a KQI model by typing a search term and clicking **Find**.



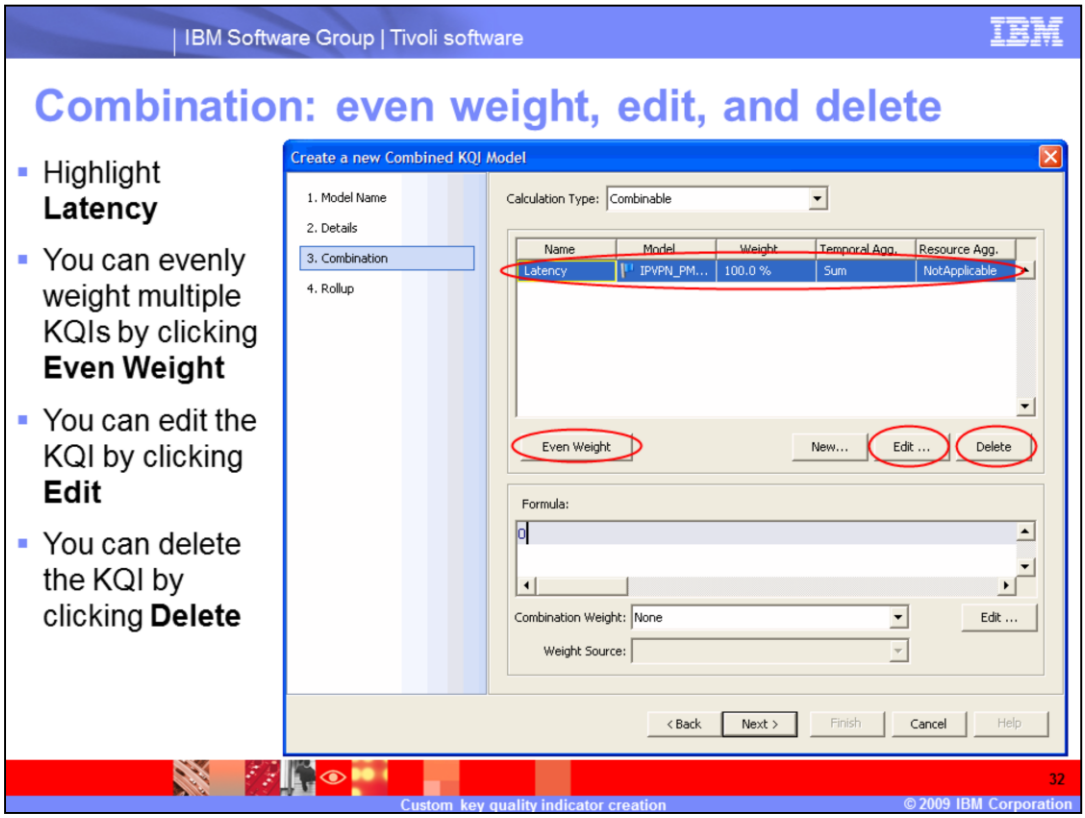
Combination details: weight and temporal aggregation.

Enter Weight **1**. Weight depends on several variables and the importance of each variable. All weights must total 1. Select **Sum** from the Temporal Aggregation menu. Temporal aggregation is only available if you selected the **Is This Model Periodic** check box.



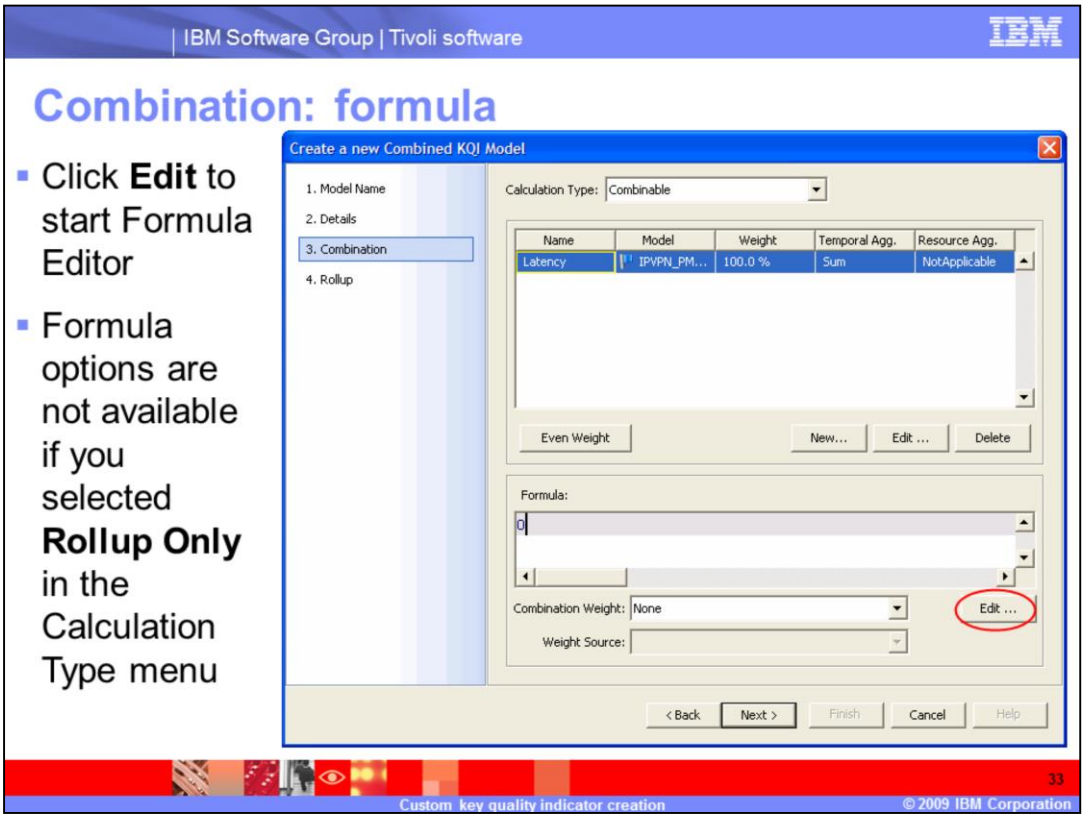
Combination: finish details.

Click **OK**. Note that **Resource Aggregation** is available if aggregation is to be performed across multiple KQIs in the same KQI model.



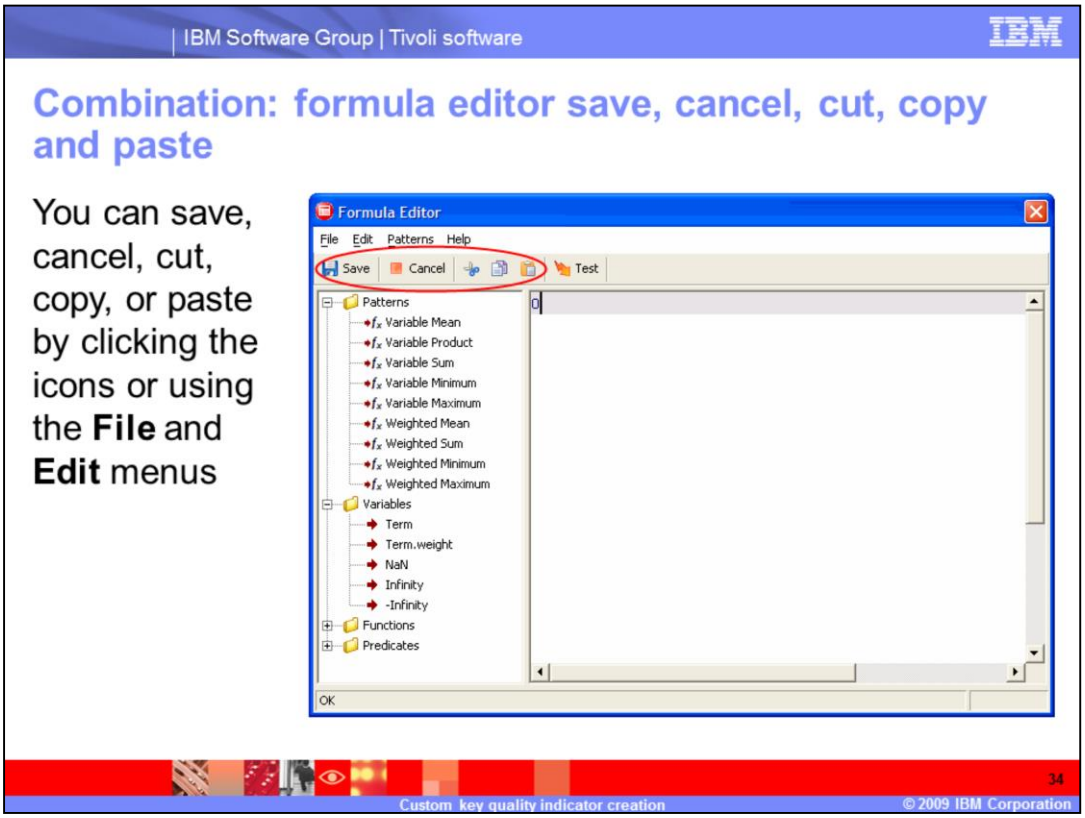
Combination: even weight, edit, and delete.

Highlight **Latency**. You can evenly weight multiple KQIs by clicking **Even Weight**. You can edit the KQI by clicking **Edit**. You can delete the KQI by clicking **Delete**.



Combination: formula.

Click **Edit** to start Formula Editor. Formula options are not available if you selected **Rollup Only** in the Calculation Type menu.

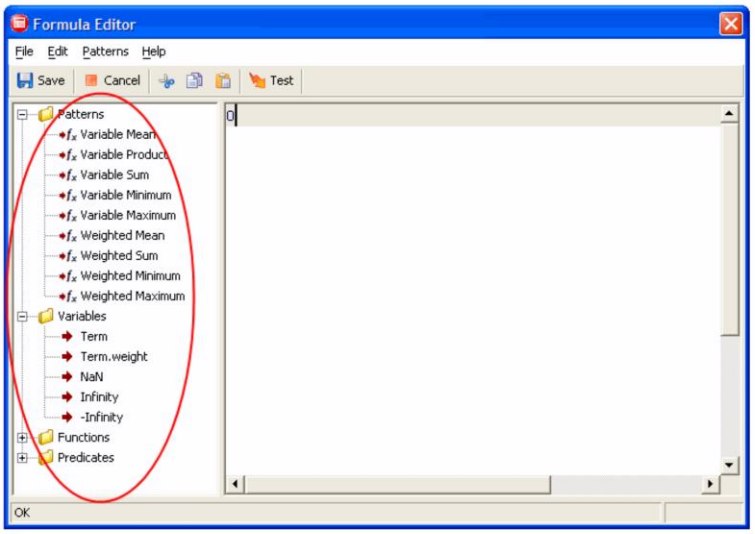


Combination: formula editor save, cancel, cut, copy and paste.

You can save, cancel, cut, copy, or paste by clicking the icons or using the **File** and **Edit** menus.

Combination: formula editor components

- The window on the left of the Formula Editor displays standard formula components available for building formulas
- Groups of components are patterns, variables, functions, and predicates



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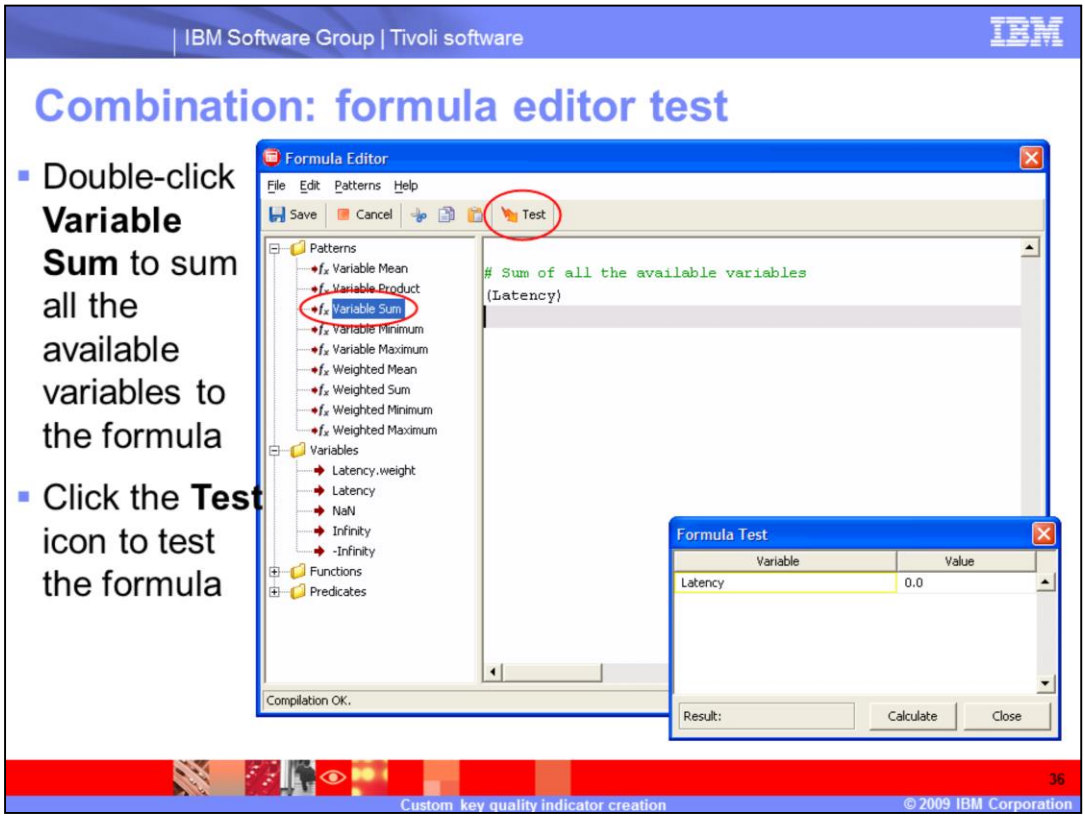
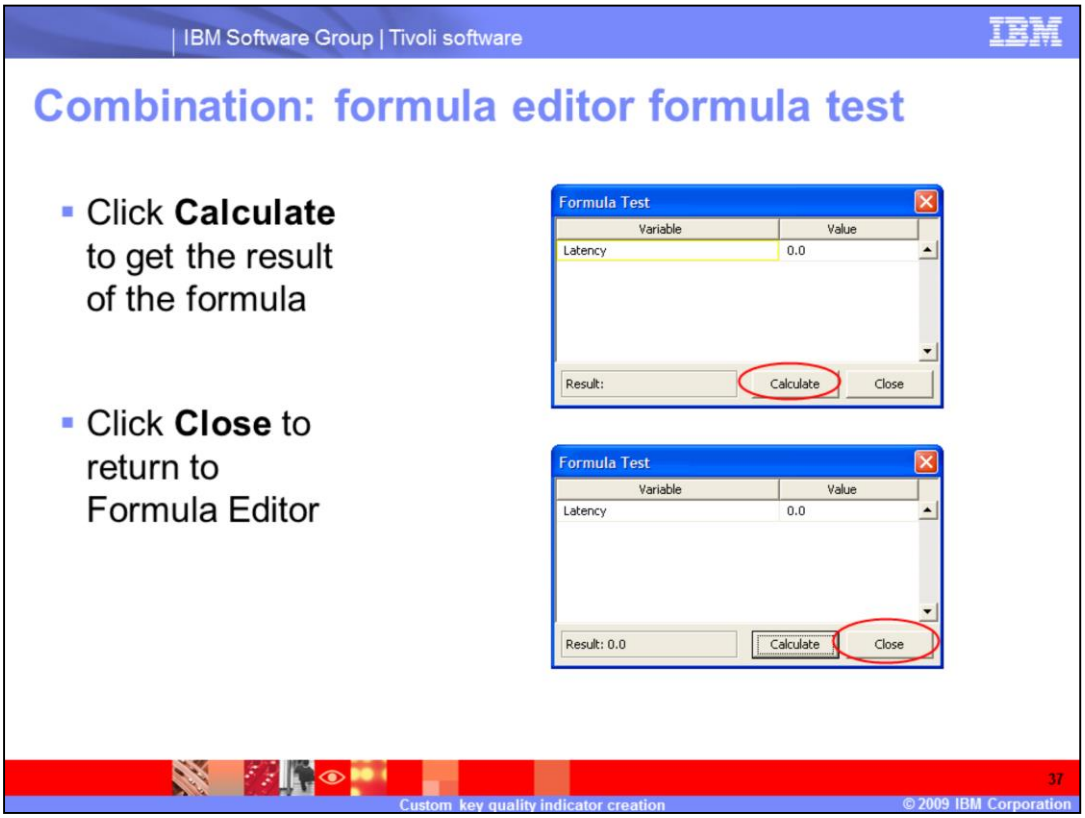
Combination: formula editor components.

The window on the left of the Formula Editor displays standard formula components available for building formulas. Four groups of components are patterns, variables, functions, and predicates.



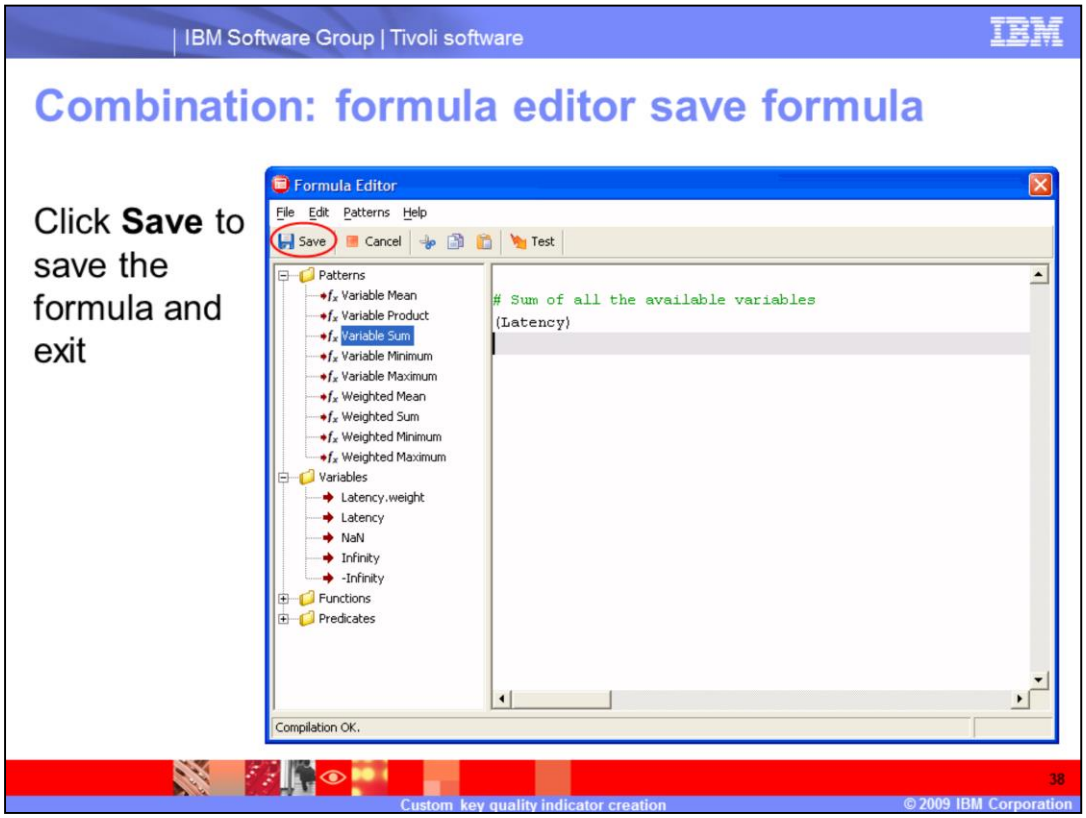
Combination: formula editor test.

Double-click **Variable Sum** to sum all the available variables to the formula. Click the **Test** icon to test the formula.



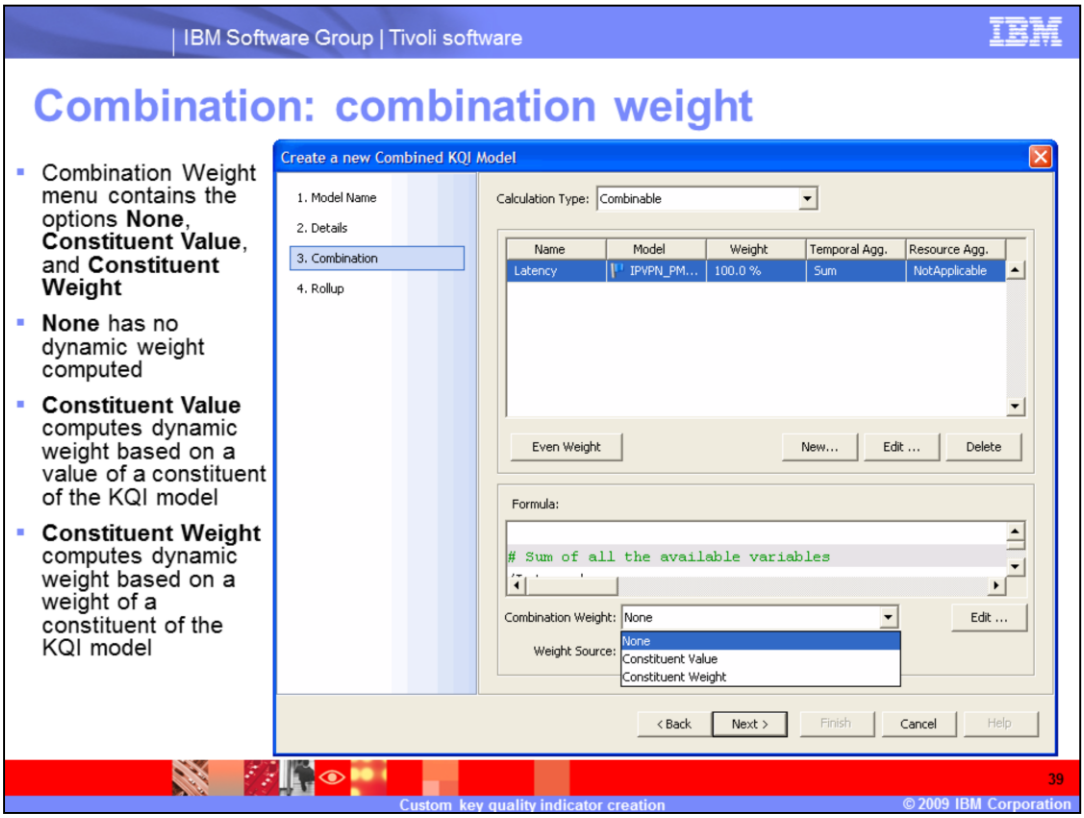
Combination: formula editor formula test.

Click **Calculate** to get the result of the formula. Click **Close** to return to Formula Editor.



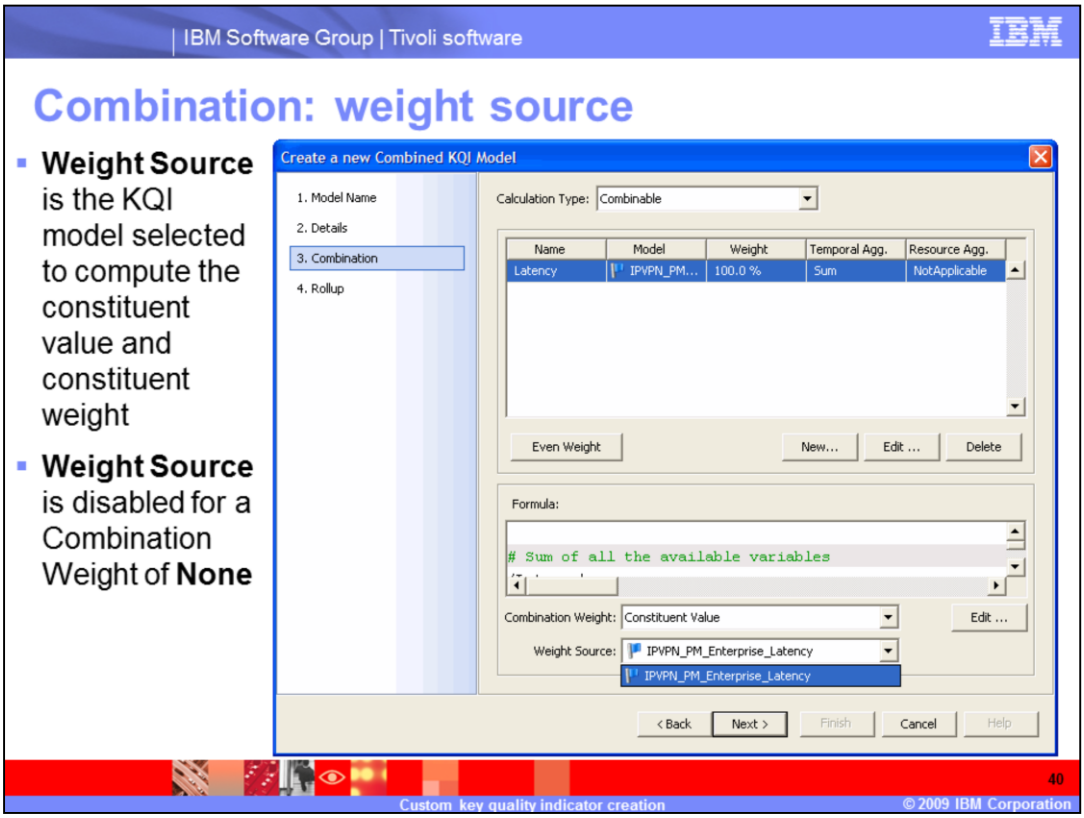
Combination: formula editor save formula.

Click **Save** to save the formula and exit.



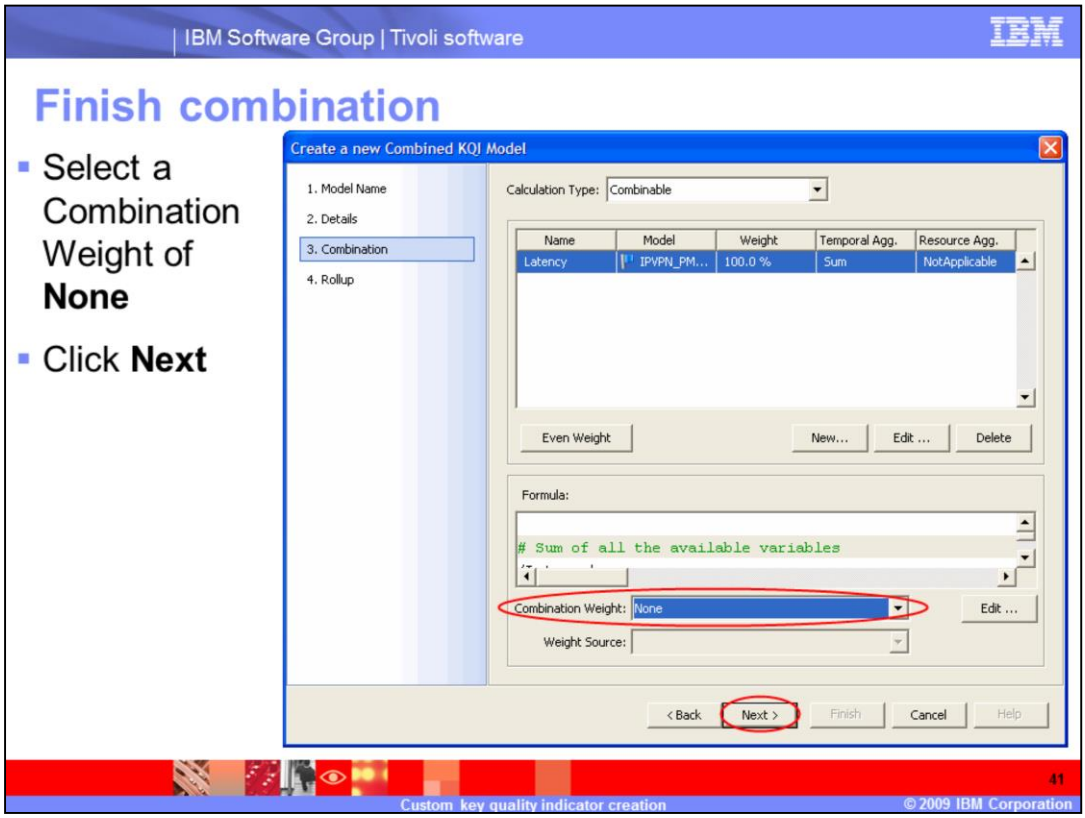
Combination: combination weight.

The Combination Weight menu contains three options: **None**, **Constituent Value**, and **Constituent Weight**. **None** has no dynamic weight computed. **Constituent Value** computes dynamic weight based on a value of a constituent of the KQI model. **Constituent Weight** computes dynamic weight based on a weight of a constituent of the KQI model.



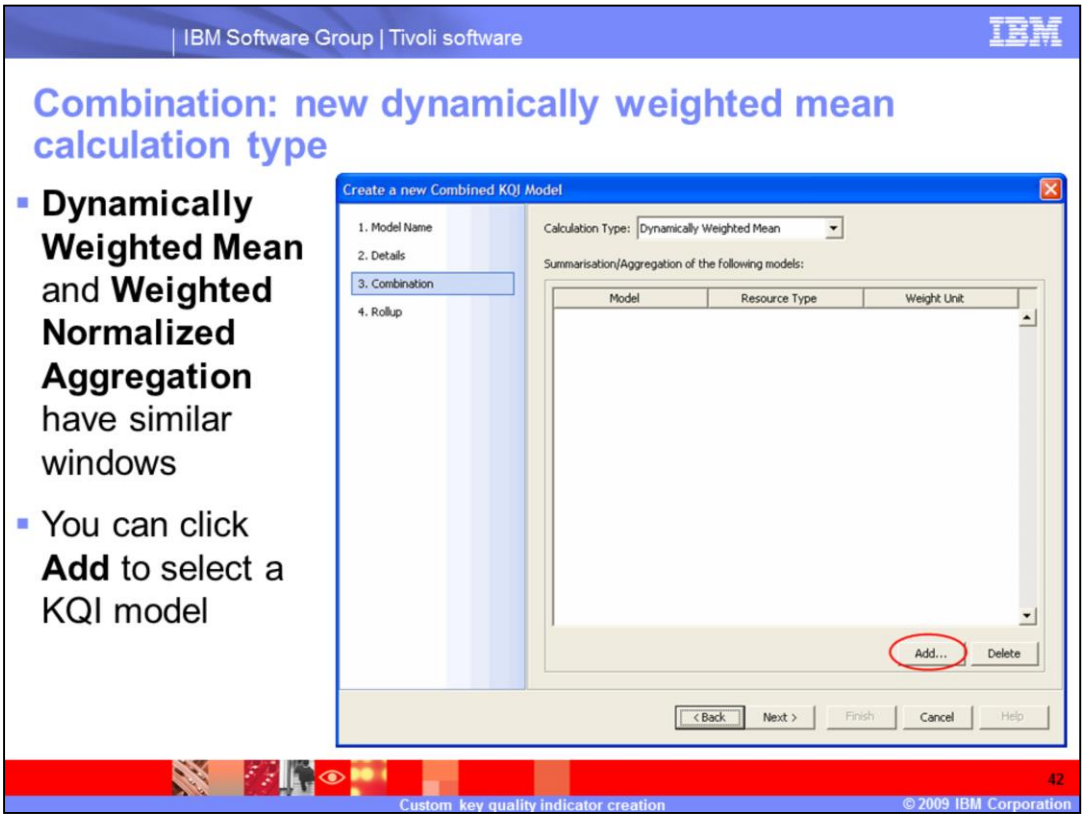
Combination: weight source.

Weight Source is the KQI model selected to compute the constituent value and constituent weight. **Weight Source** is disabled for a Combination Weight of **None**.



Finish combination.

Select a Combination Weight of **None**. Click **Next** to finish the Combination Weight section.

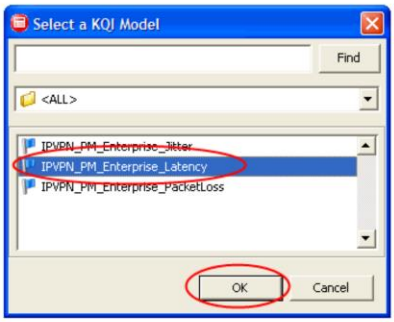


Combination: new dynamically weighted mean calculation type.

Dynamically Weighted Mean and **Weighted Normalized Aggregation** have similar windows. You can click **Add** to select a KQI model. **Dynamically Weighted Mean** is used in this example.

Combination: dynamically weighted mean select a KQI model

- Create KQI models with units and resource matching the KQI
- Highlight **IPVPN_PM_Enterprise_Latency**
- Click **OK**
- You can show a specific KQI category by selecting from the pull-down menu
- You can find a KQI model by typing a search term and clicking **Find**



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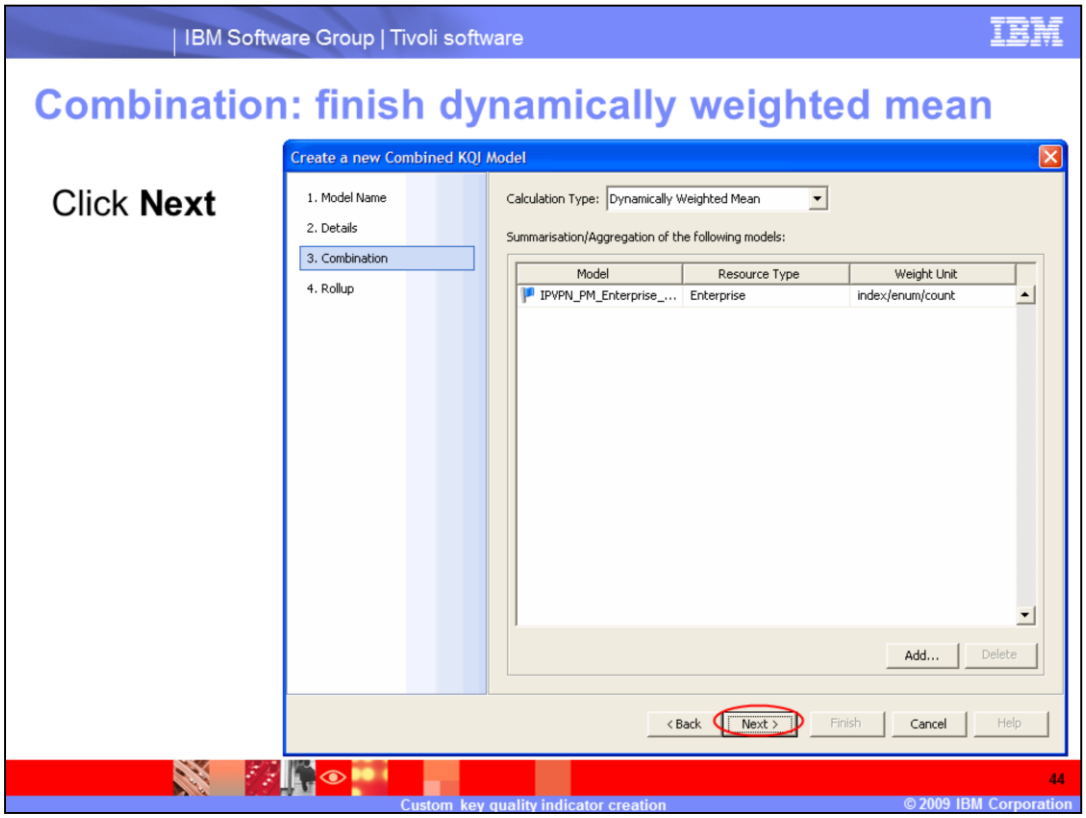
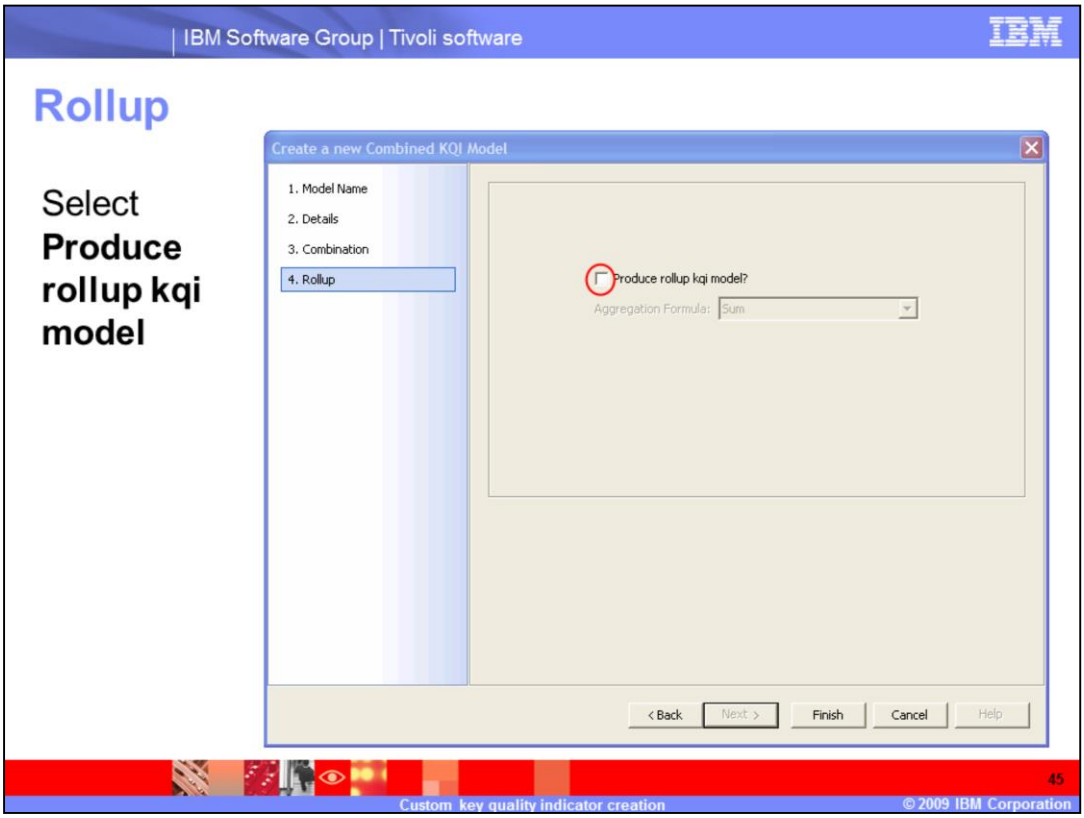
Combination: dynamically weighted mean select a KQI model.

In this example you create KQI models with units and resource matching the KQI. Highlight **IPVPN_PM_Enterprise_Latency**. Click **OK**. You can show a specific KQI category by selecting from the pull-down menu. You can find a KQI model by typing a search term and clicking **Find**.



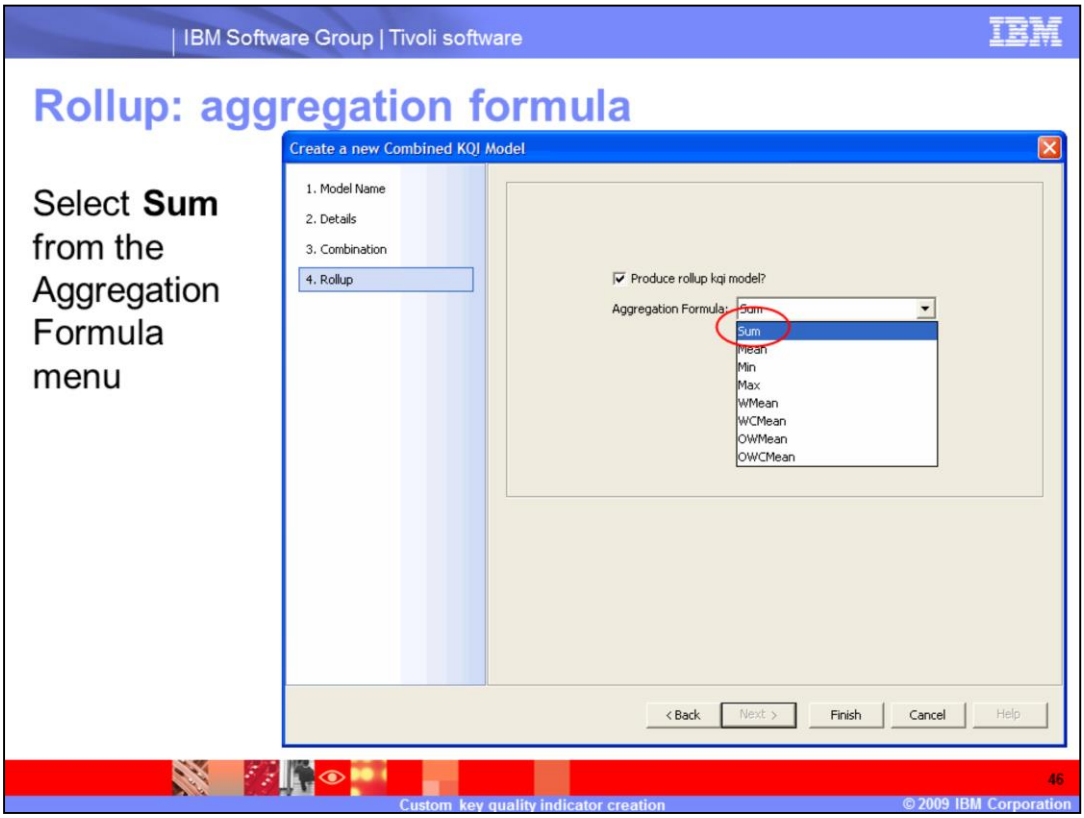
Combination: finish dynamically weighted mean.

Click **Next** to finish the Dynamically Weighted Mean section.



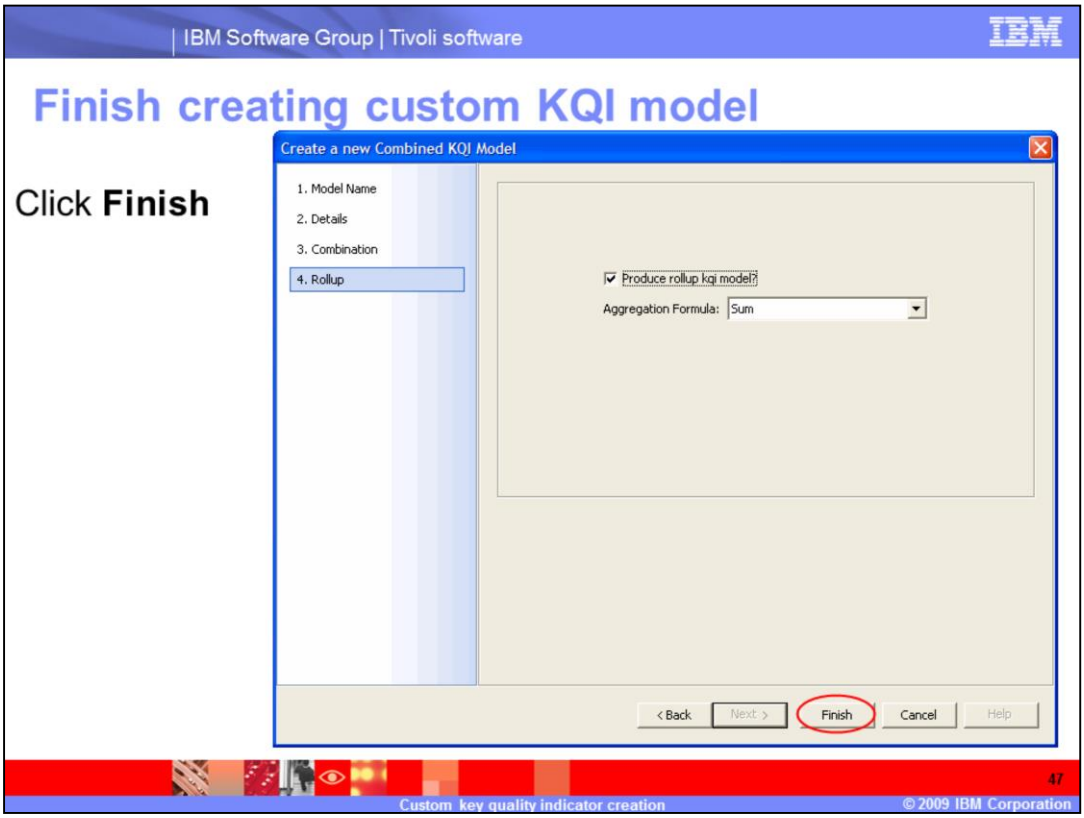
Rollup.

Select the **Produce rollup kqi model** check box to produce a rollup kqi model.



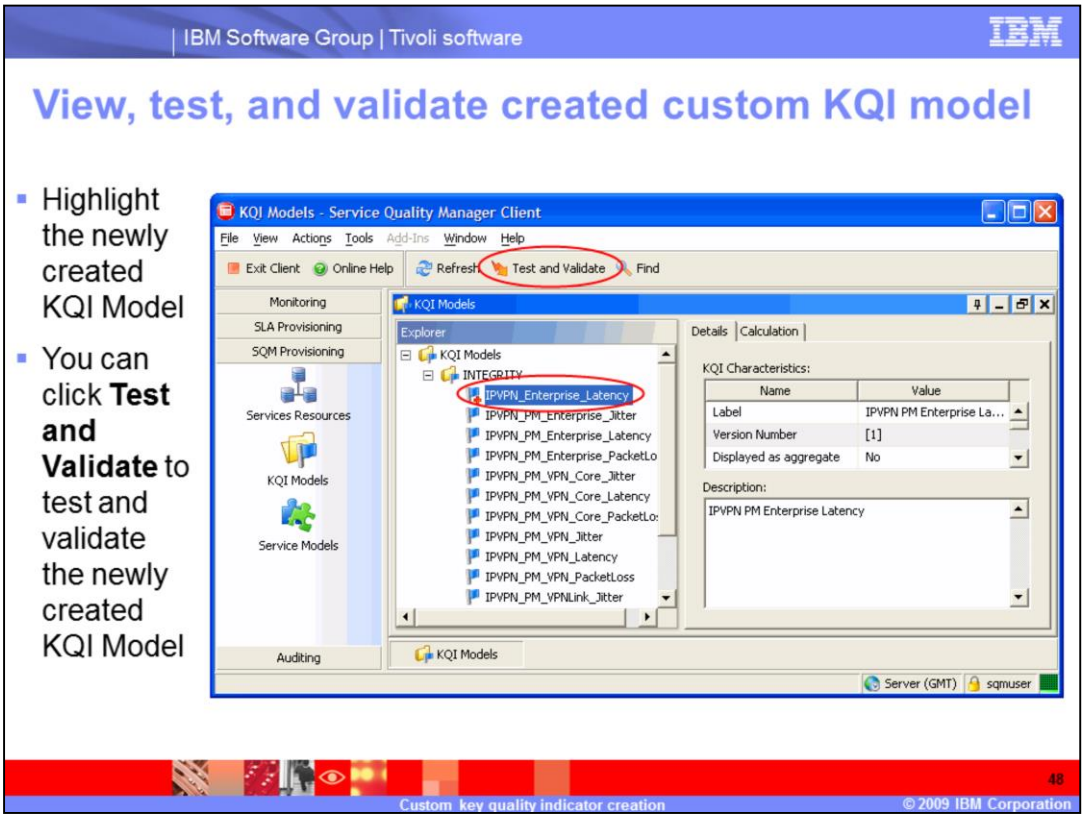
Rollup: aggregation formula.

Select **Sum** from the Aggregation Formula menu.



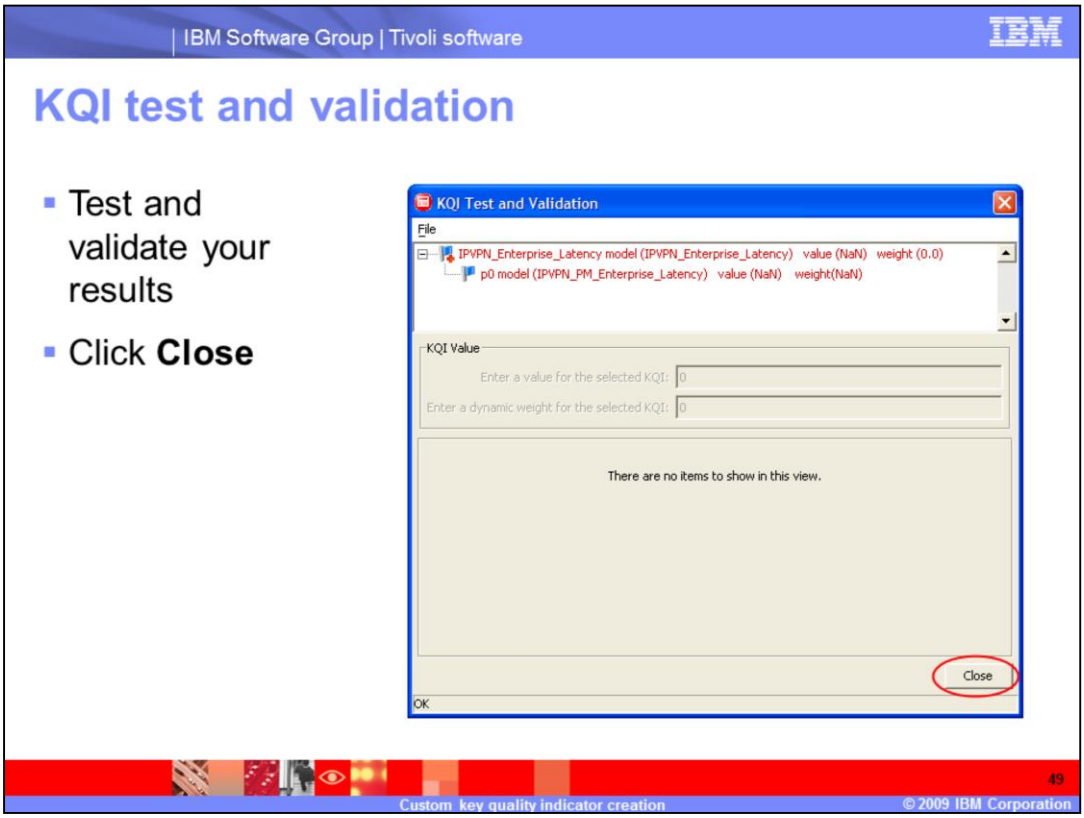
Finish creating custom KQI model.

Click **Finish** to finish creating a custom KQI model.



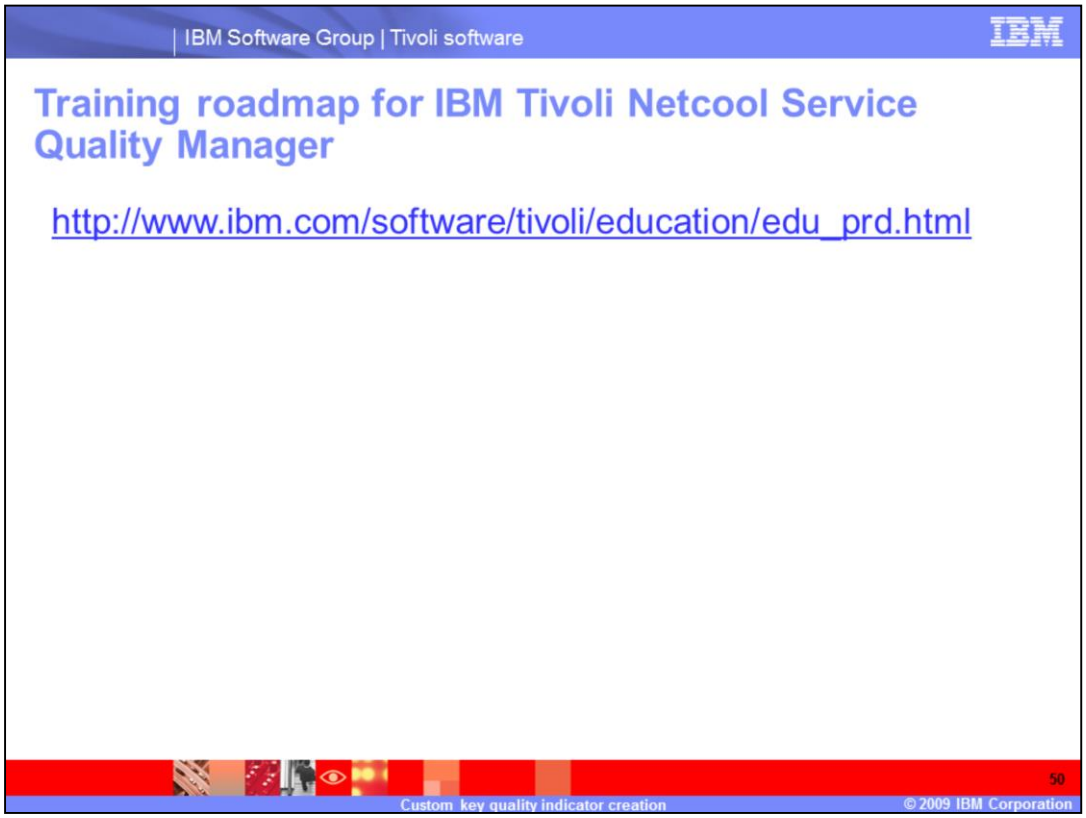
View, test, and validate created custom KQI model.

Highlight the newly created KQI Model. You can click **Test and Validate** to test and validate the newly created KQI model.



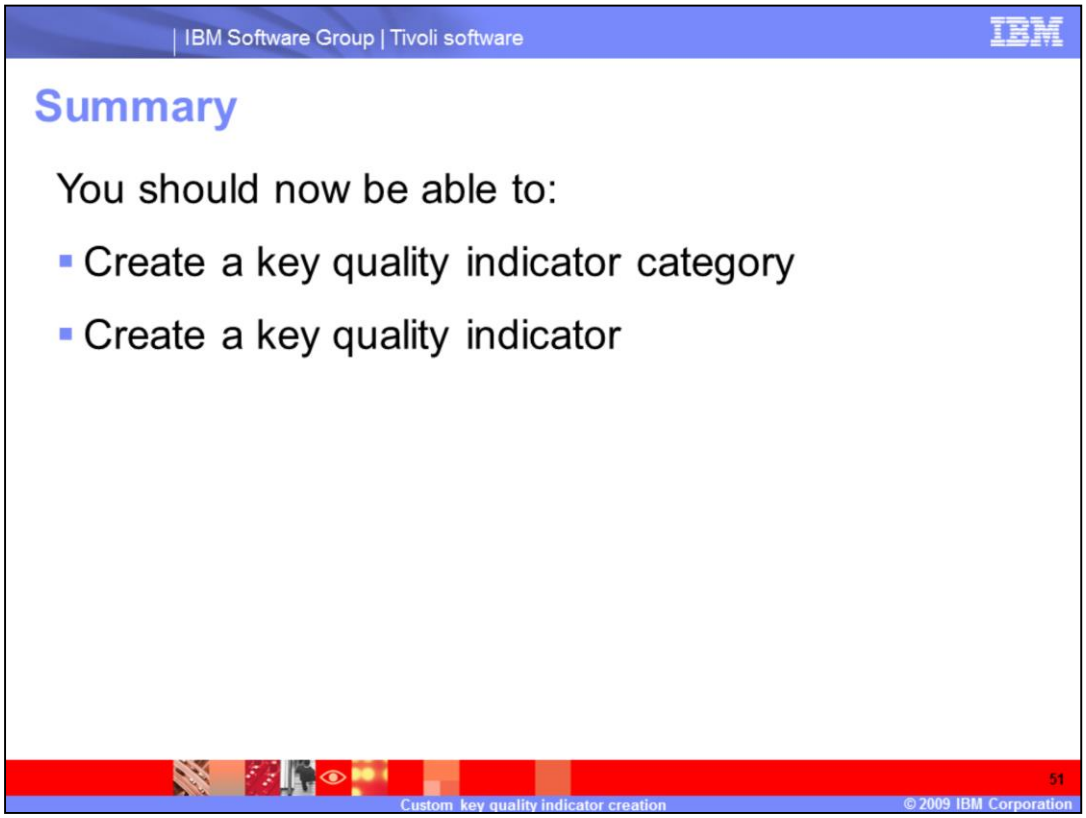
KQI test and validation.

Test and validate your results. Click **Close**.



Training roadmap for IBM Tivoli Netcool Service Quality Manager.

You can see the training roadmap for IBM Tivoli Netcool Service Quality Manager by going to the URL listed on the slide.



Summary.

You should now be able to create a key quality indicator category and create a key quality indicator.

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