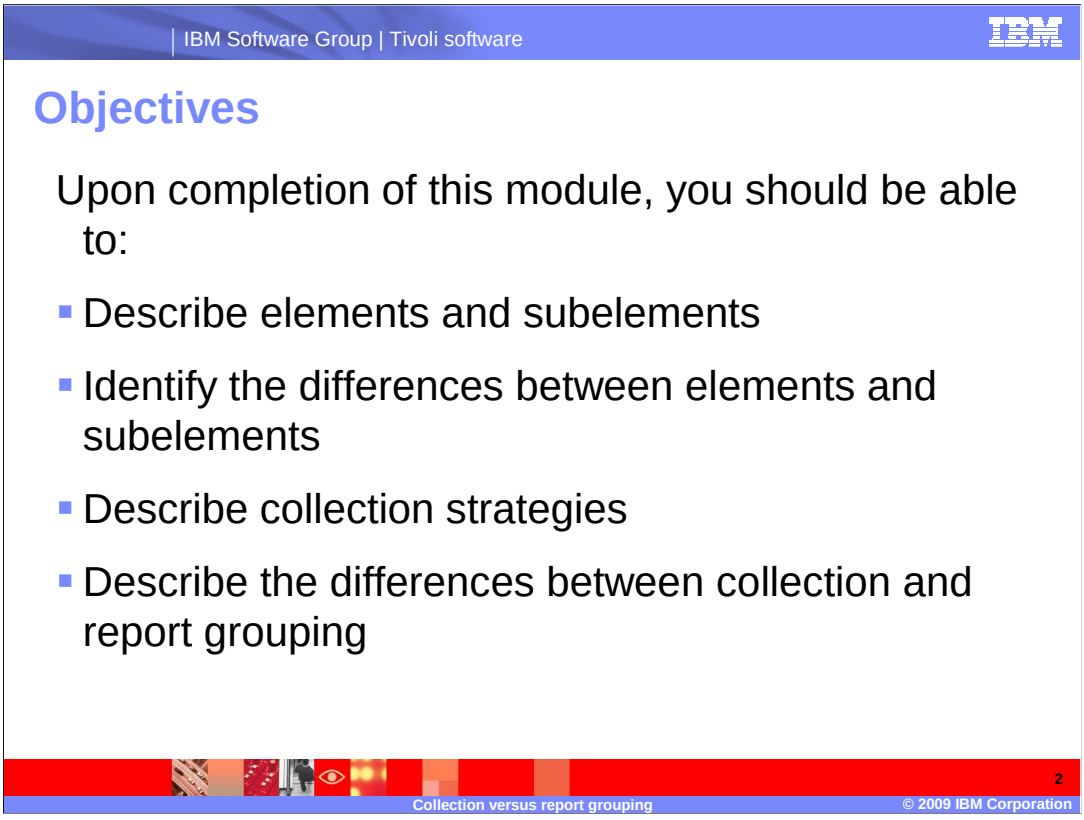
This IBM Education Assistant module will highlight the differences between Collection and Report Grouping in IBM Tivoli Netcool® Proviso® 4.4.3.



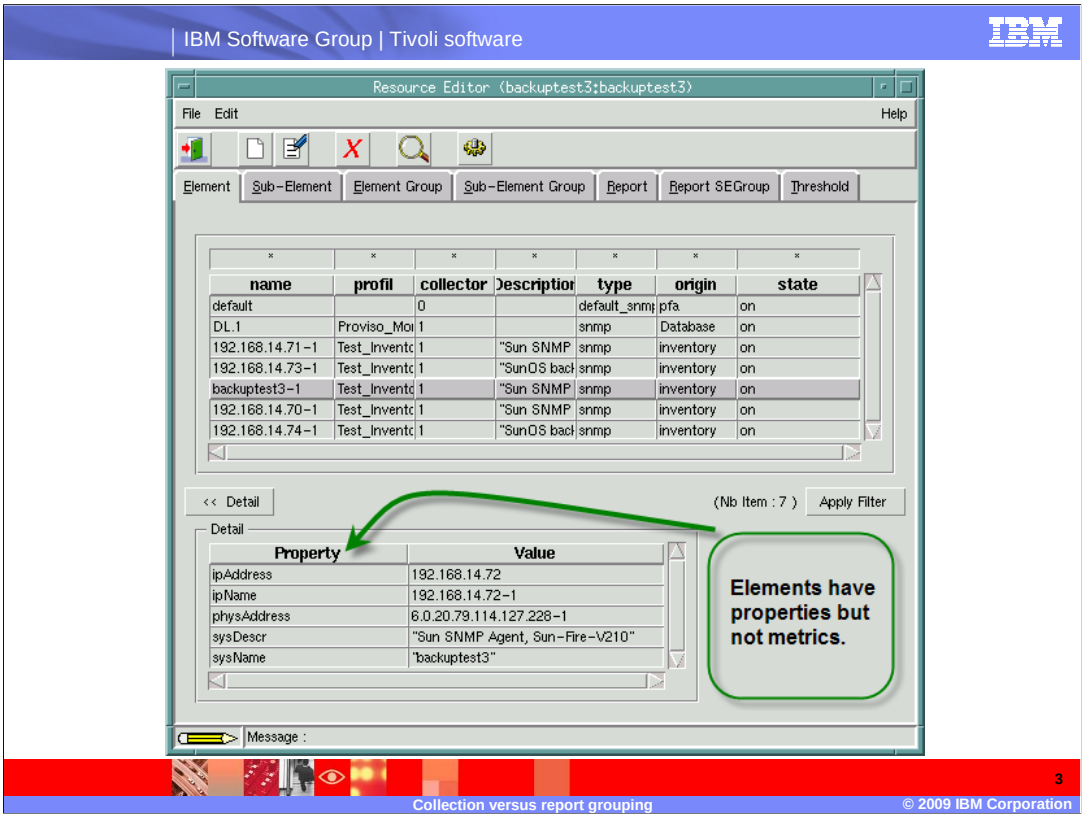
Upon completion of this module, you should be able to:

Describe elements and subelements

Identify the differences between elements and subelements

Describe collection strategies

Describe the differences between collection and report grouping



Resources are the network elements and subelements that are inventoried by Proviso.

Resources are discovered either by polling an SNMP network or by processing the bulk collection files presented to Proviso from network management interfaces.

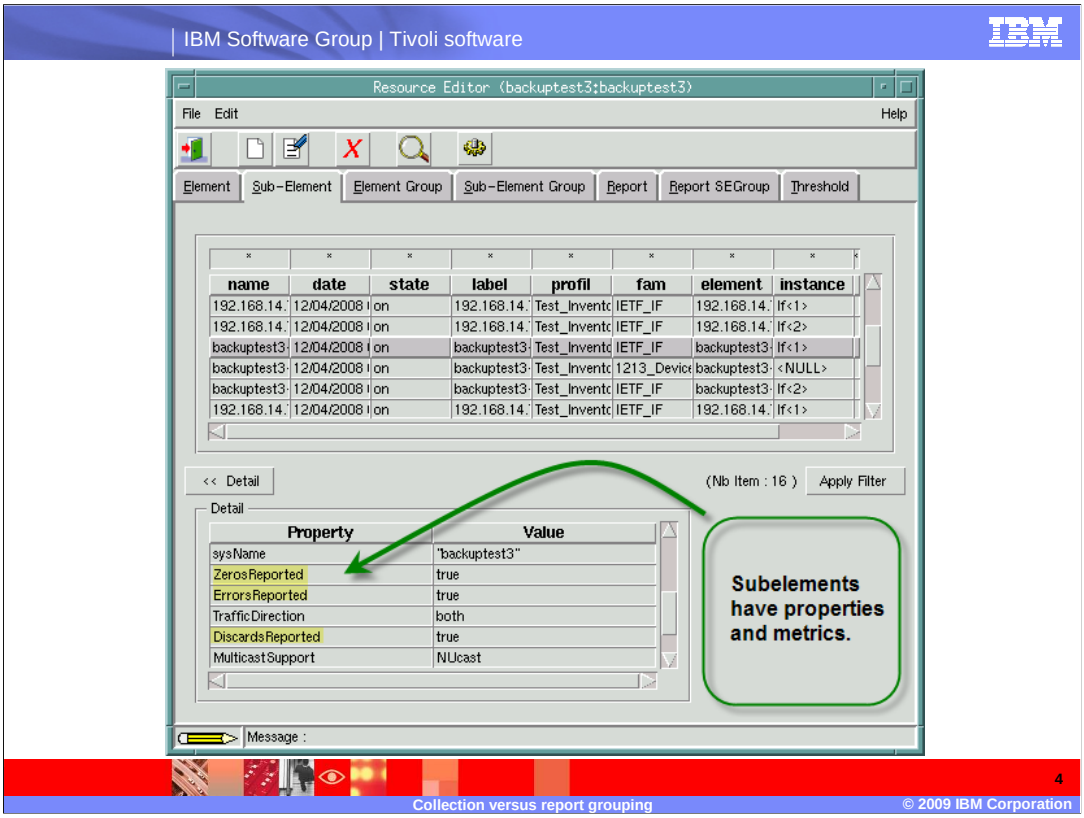
Discovery of resources that will not be reported on adds additional work to the Proviso installation. Therefore, restrictions can be placed on what is to be discovered.

Once discovered, resources are tracked (synchronized) and grouped. Two grouping types are used in Proviso, collection and reporting.

Elements are a managed network node or host, usually a physical object (for example, a router, switch, or server). Collection is not performed on elements.

Subelements are the component pieces of elements, such as an interface, a memory pool, a fan, a DLCI. They can be physical objects or logical constructs.

An element only has properties but a subelement will have properties and metrics. Collection is performed on subelements.



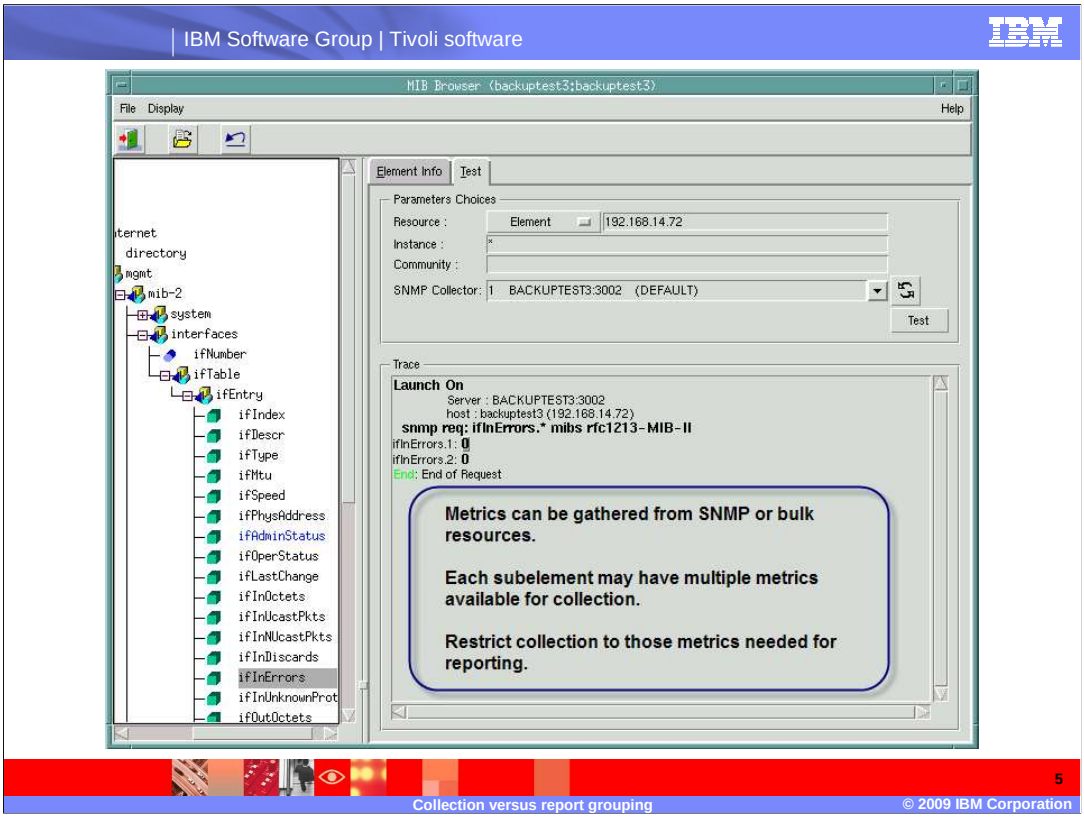
Properties are used to define the resource, either an element or a subelement. Properties are used to identify the resource and are stored as metadata in the Proviso database.

Metrics only exist for subelement resources. A subelement may have more than one metric available for collection. For example an interface may have metrics for availability, packets in, and packets out, among other items.

Often a set of metrics must use a collection formula to present useful data to the users. As an example, the percent utilization of an interface must be computed by using the metrics for utilization and the bandwidth properties of the interface.

Collection formulas should not be confused with the formulas used in the Complex Metric Engine. The CME formulas, for example, can compute averages, min, or max values over a range of resources or time unlike the collection formulas. Collection formulas are applied only to the single subelement's metric for the immediate period collected.

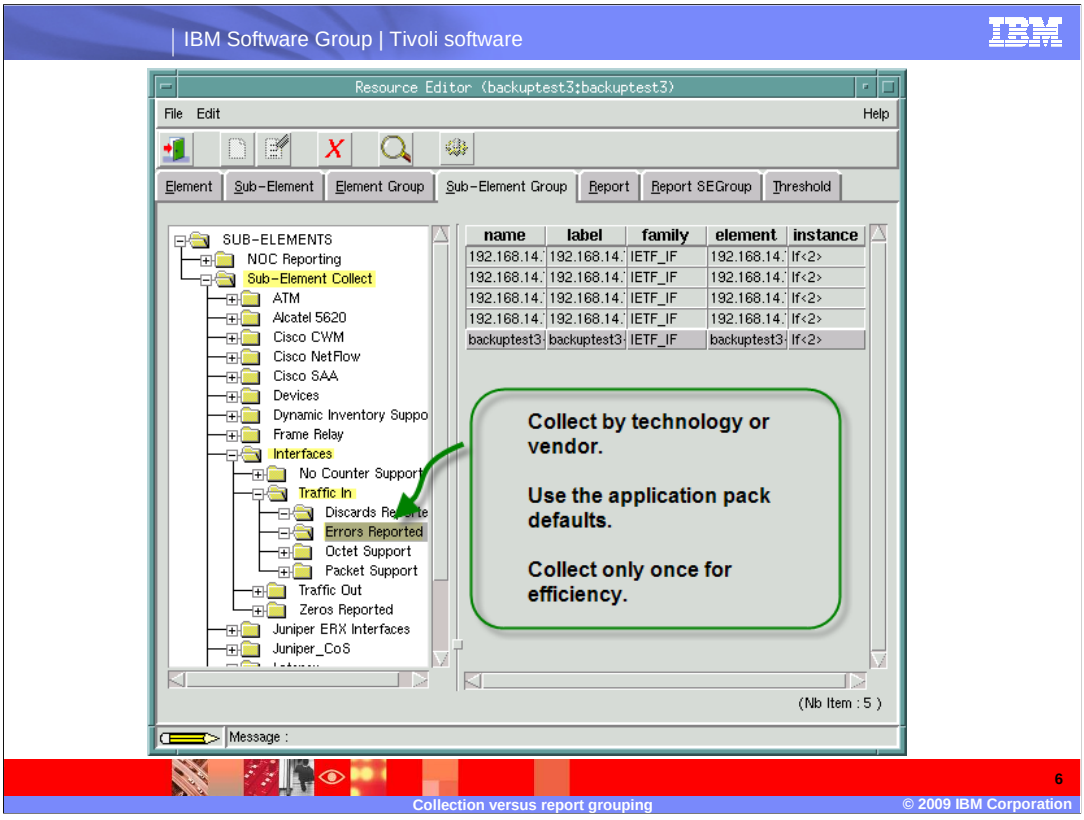
Only those metrics that are of interest to Proviso users should be collected.



Collection is the process of gathering useful metrics from resources. Metrics can be gathered from SNMP devices or from bulk interfaces. The metrics are associated to specific resources by referencing the properties of the resource.

The individual metrics collected by the DataLoad are used by the corresponding DataChannel's CME as input to aggregation. There the individual metrics will be aggregated

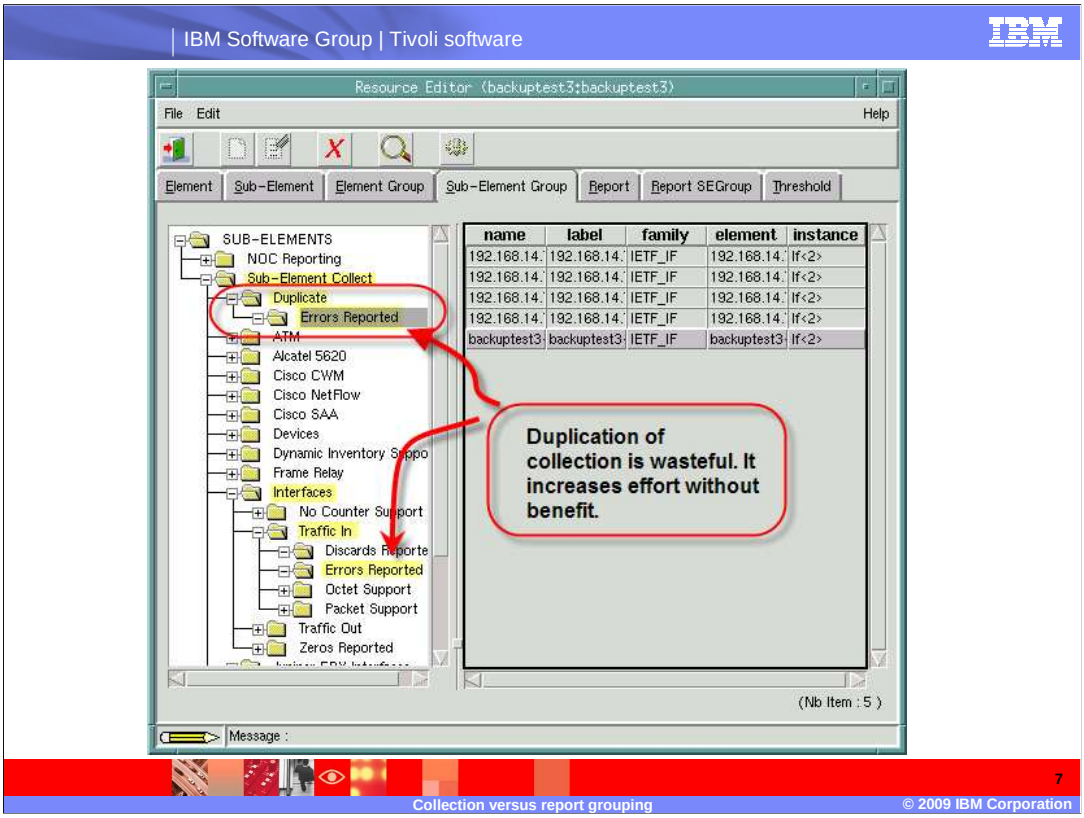
Collection should be restricted only to those metrics that are needed to support the Proviso reports required by end users. Collecting metrics that will not be reported is counterproductive.



Ideally collection will use the minimum amount of processing capacity and network bandwidth necessary to complete the work.

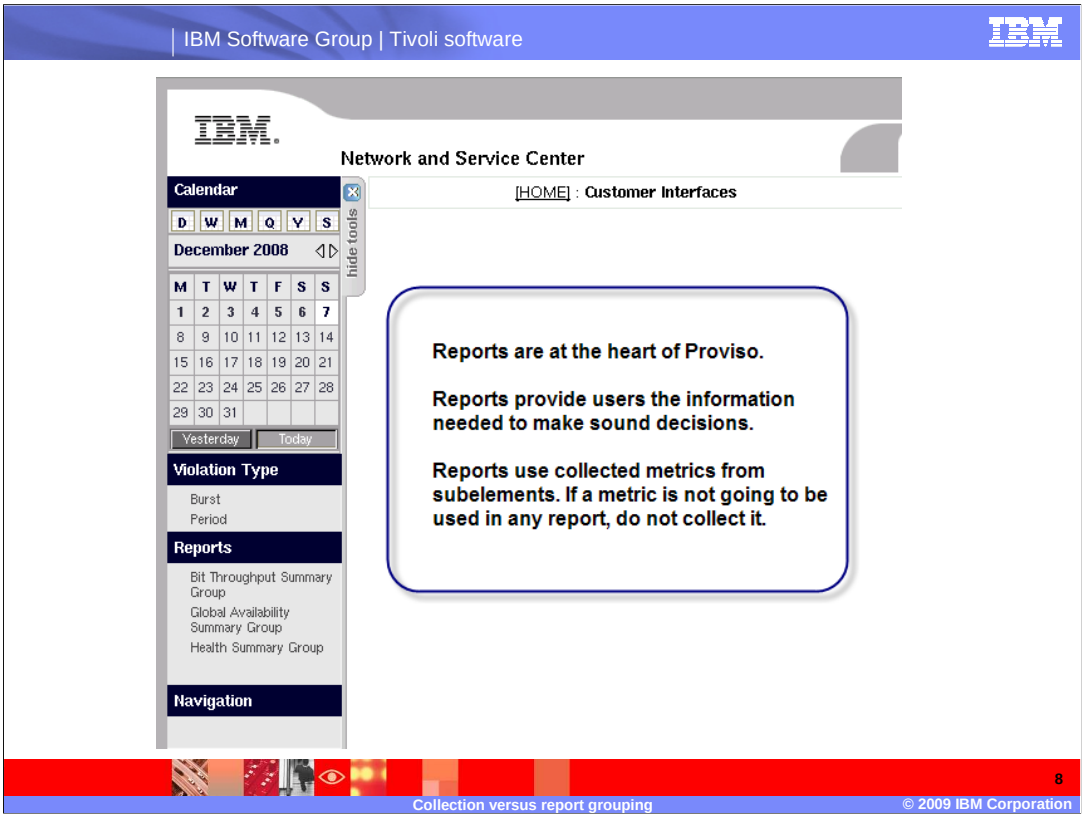
This implies that collection should be optimized around technology, especially where a single collection formula can be employed for a set of collected metrics.

When an application pack is applied for a specific technology/vendor product, its default collection strategies should be utilized.



Collecting an individual metric from the same resource more than once is wasted effort. If an SNMP metric is to be collected, collecting it more than once places additional workload on the network you are collecting from. It also produces additional work for the DataLoad collector, wasting processor and memory resources on a metric value that has already been processed.

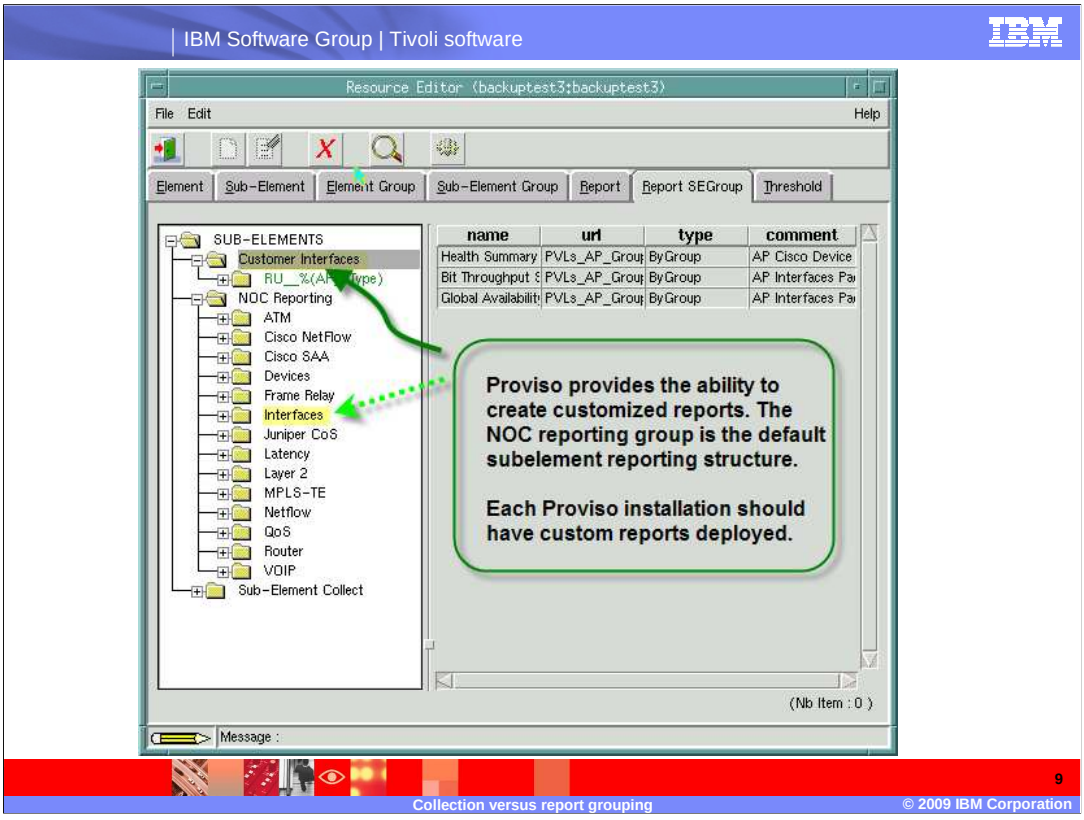
In the end, regardless of the additional collection, the CME will discard the redundant metrics.



Reporting is at the heart of Proviso. Proviso reports give customers, executives, and network managers the ability to assess network performance from their perspective.

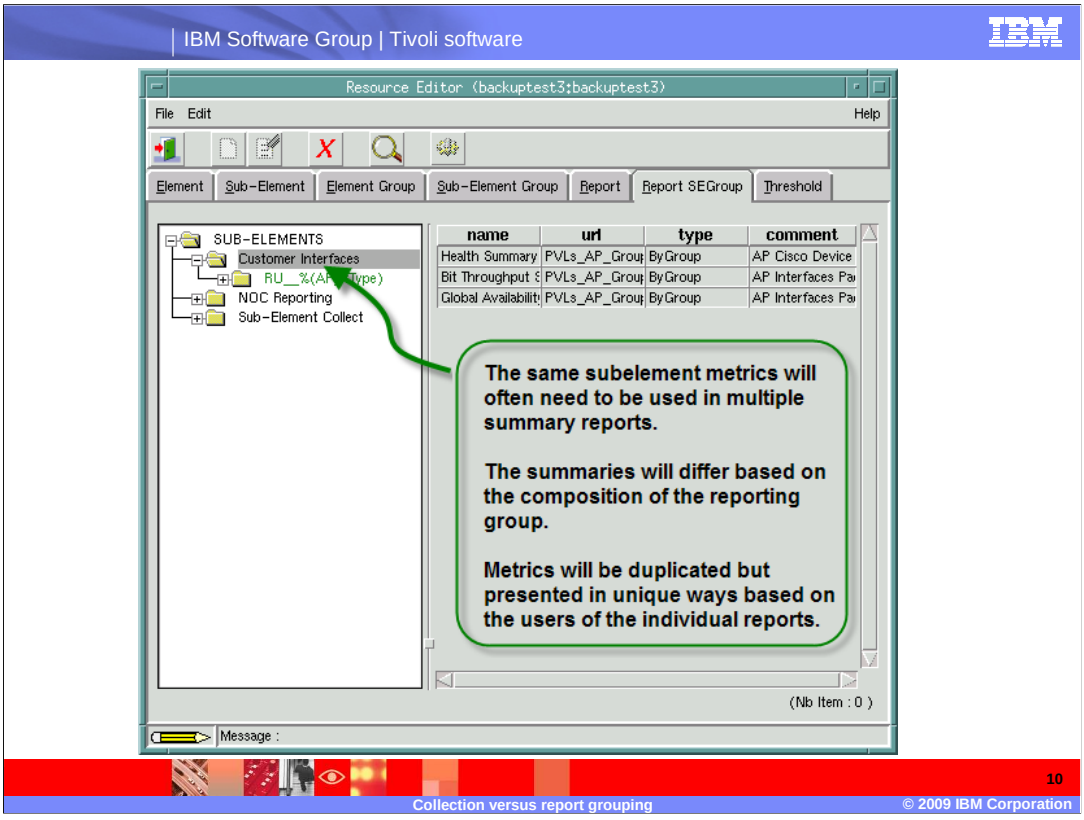
Using historical data, in addition to recently collected data, Proviso can provide trending analysis as well as alert on burst or potential threshold violations.

Further, everything that is collected should end up in a report; otherwise the effort expended to collect the metric is wasted.



Reports are generated for use by reporting groups. Each Proviso installation should have a variety of customized reporting groups created for use beyond the default NOC reporting group.

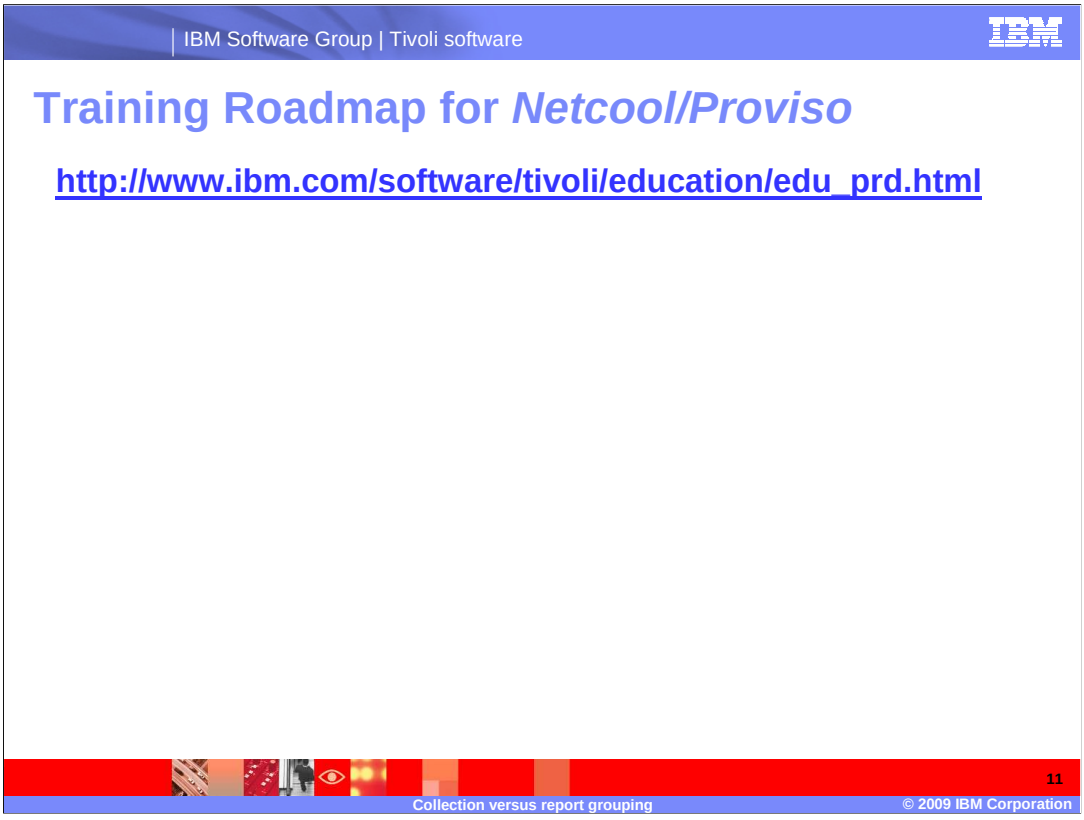
Reporting groups should be created that present a comprehensive view of network performance for each type of user or customer group. The reports should progress from summaries of resources to resource specific reports.



Given multiple users, all interested in the same resources but with differing aggregation requirements; the same metrics will be incorporated into multiple reports.

Proviso aggregates based on the needs of reporting. Therefore, while individual metrics are processed by the CME, they are then utilized as often as needed to provide optimized reporting performance.

By pre populating the metrics into reporting groups before those reports are requested by users, reporting speed in Proviso is enhanced.



Copy and paste the link provided into the browser of your choice to explore the training roadmap for Netcool/Proviso.

Summary

You should now be able to:

- Describe elements and subelements
- Identify the differences between elements and subelements
- Describe collection strategies
- Describe the differences between collection and report grouping

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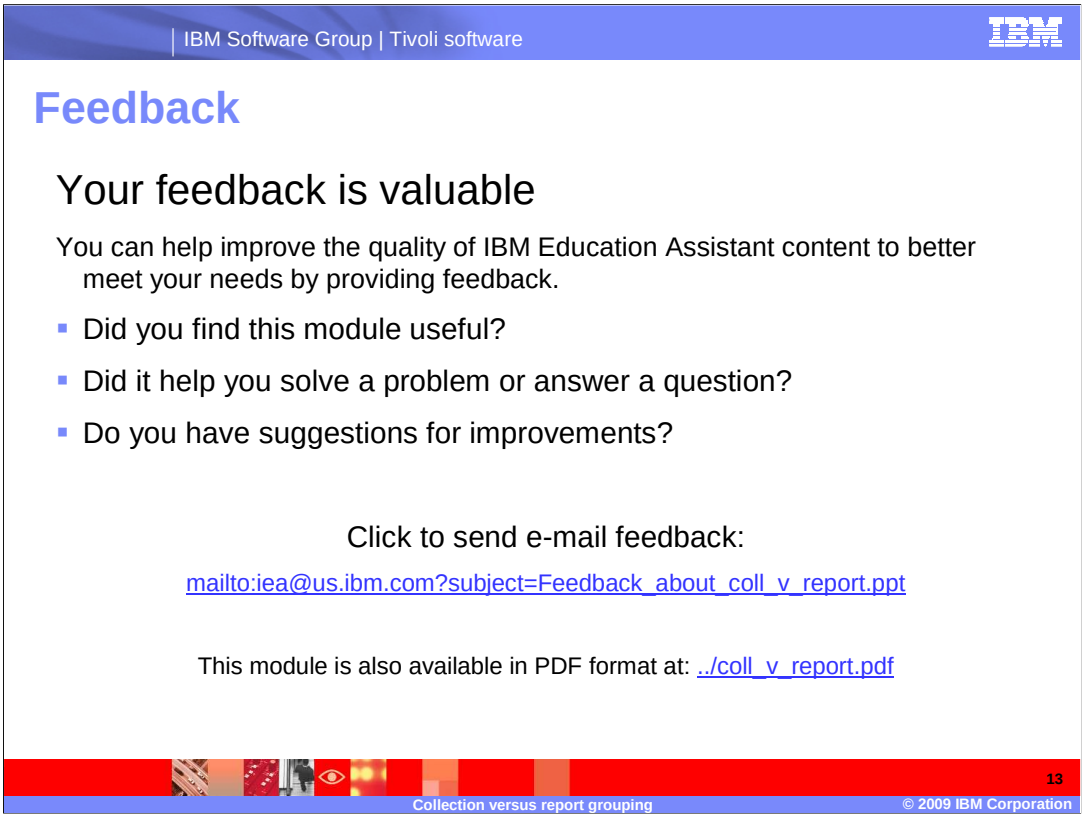

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