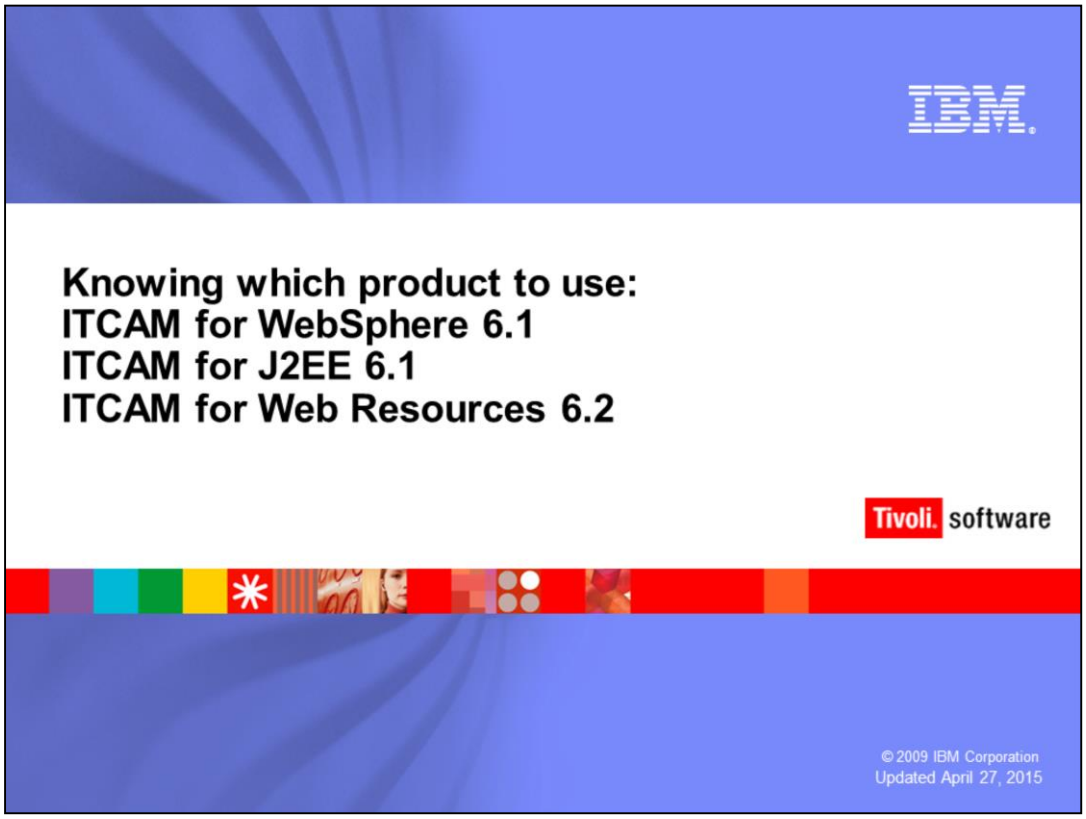


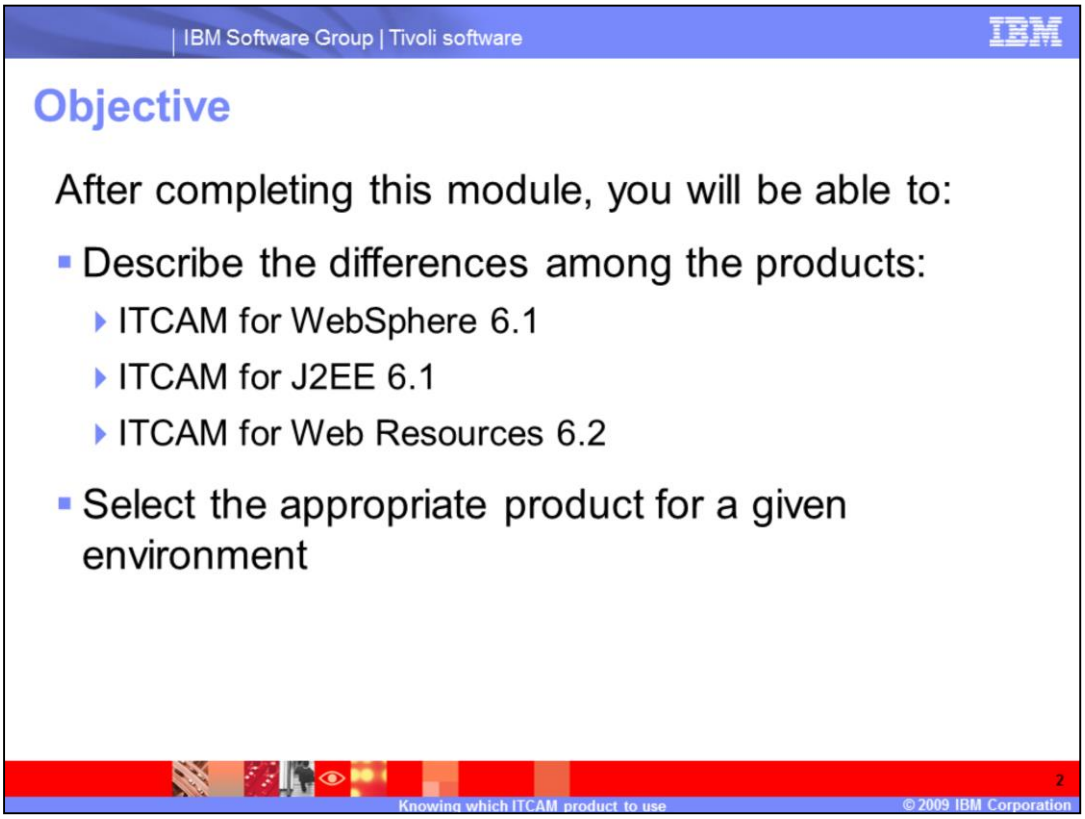
Knowing which product to use:

ITCAM for WebSphere® 6.1,

ITCAM for J2EE™ 6.1,

ITCAM for Web Resources 6.2

This module explains the differences among three products in the IBM Tivoli Composite Application Management (ITCAM) family.

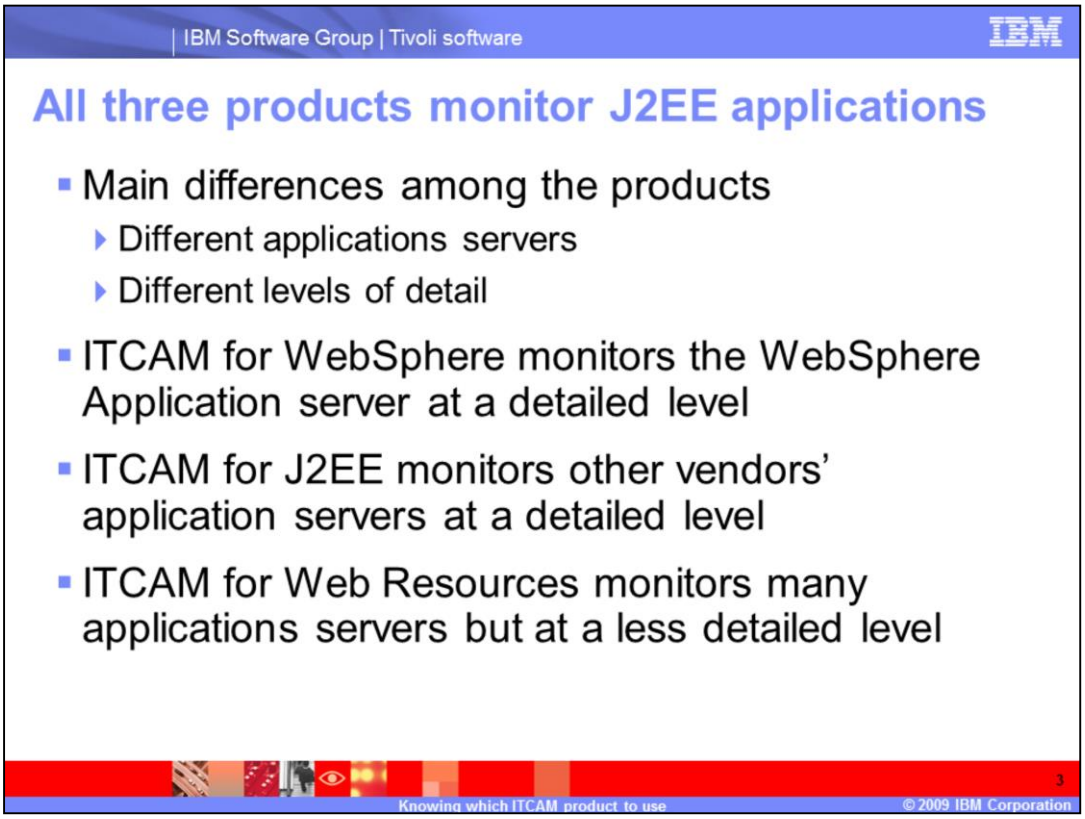


After completing this module, you will be able to:

Describe the difference among the products:

- ITCAM for WebSphere
- ITCAM for J2EE
- ITCAM for Web Resources

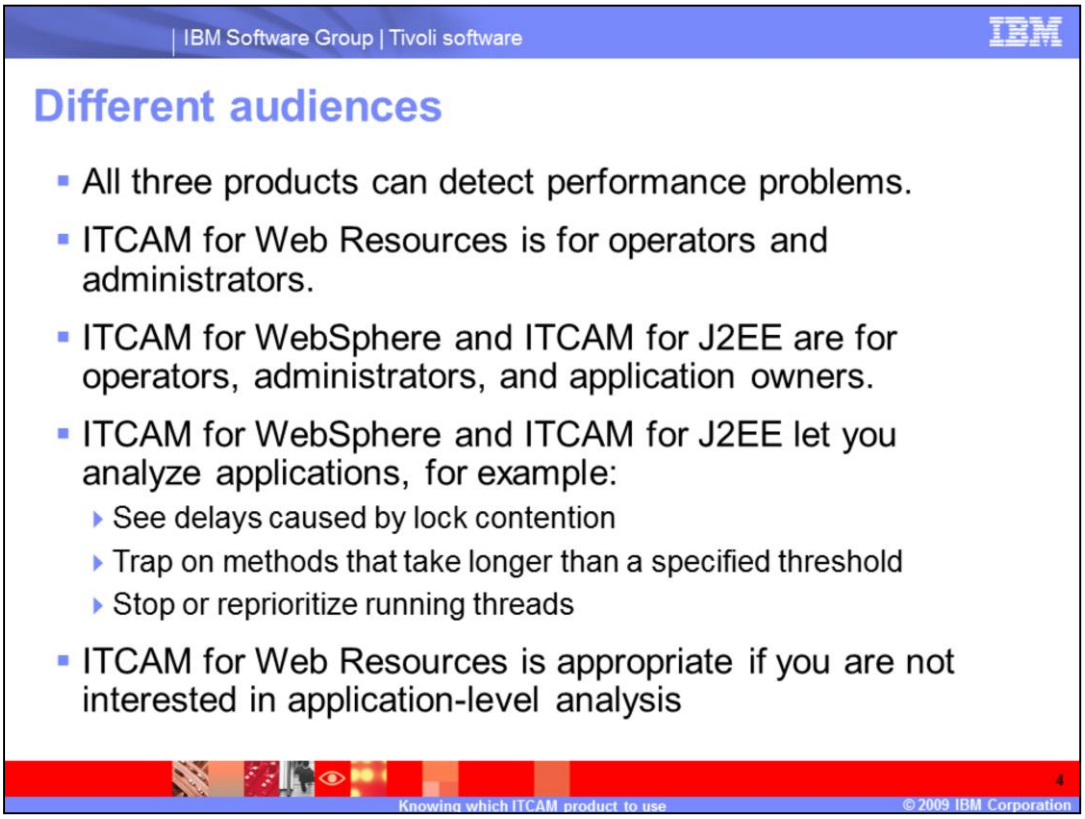
And to select the appropriate product for a given environment.



Tivoli has three products that monitor J2EE applications. The main differences are: they monitor different application servers and provide different levels of detail.

ITCAM for WebSphere and ITCAM for J2EE do the same thing: they provide a deep level of detail so that a problem can be analyzed down to the application level. ITCAM for WebSphere monitors the WebSphere Application server, and ITCAM for J2EE monitors other vendors' application servers.

ITCAM for Web Resources provide less detailed information than the other products provide. Operators and administrators monitor application availability and performance, but they can not analyze application internals. ITCAM for Web Resources monitors both IBM and other vendors' application servers.



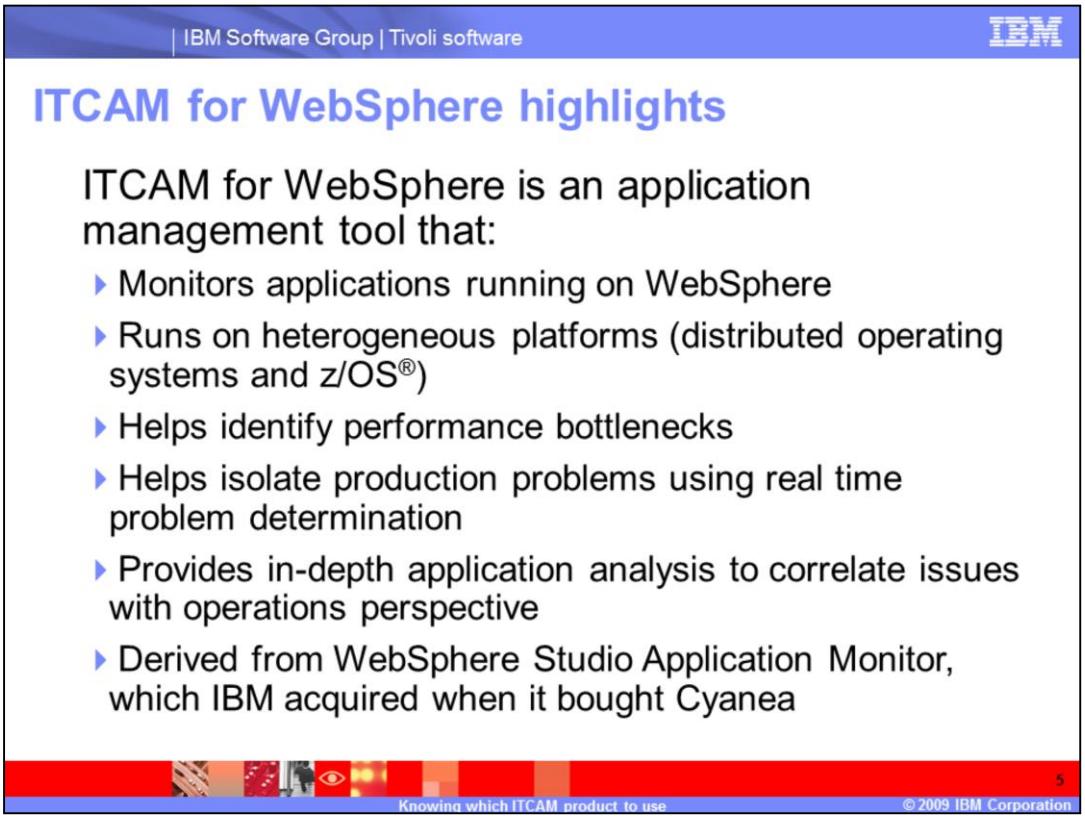
All three products can detect performance problems.

ITCAM for Web Resources is for operators and administrators.

ITCAM for WebSphere and ITCAM for J2EE are for operators, administrators and application owners.

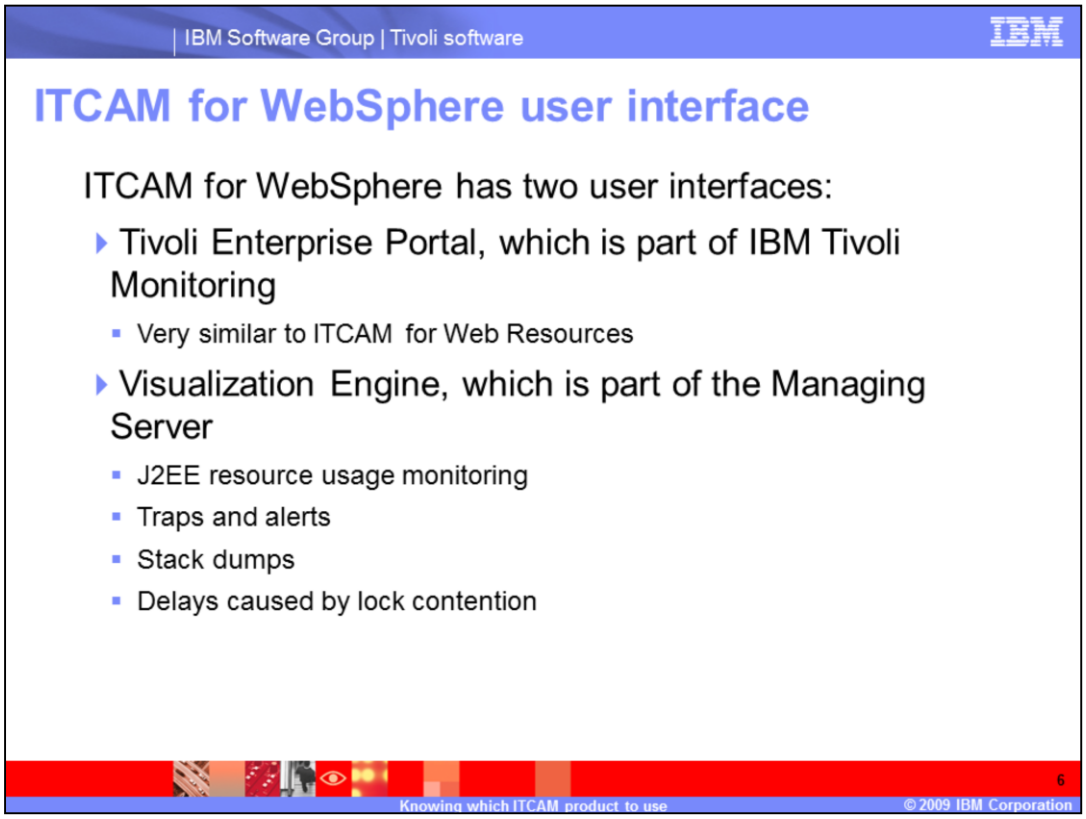
If you are interested in analyzing application code to find the cause of the performance problem, then you would need ITCAM for WebSphere or ITCAM for J2EE, depending upon which application server you are using. They provide information about lock contention, the performance of running transactions and the ability to stop or reprioritize running threads. You have the ability to define traps. For example, trap on methods that take longer than a specified threshold and capture the stack trace leading up to the slow method.

ITCAM for Web Resources is appropriate if you are interested in operations-level, not application-level, analysis. If the application is a commercial product and you do not own the source code, you do not need the more detailed information. If your business is a data center, for example, you have no interest in looking inside a client's application to analyze its performance.



ITCAM for WebSphere is an application management tool that monitors applications running on WebSphere. It runs on heterogeneous platforms, distributed operating systems, and z/OS. It helps identify performance bottlenecks. It helps isolate production problem using real-time problem determination. It provides in-depth application analysis to correlate issues with the operations perspective.

ITCAM for WebSphere is derived from WebSphere Studio Application Monitor, which IBM acquired when it purchased the company Cyanea.

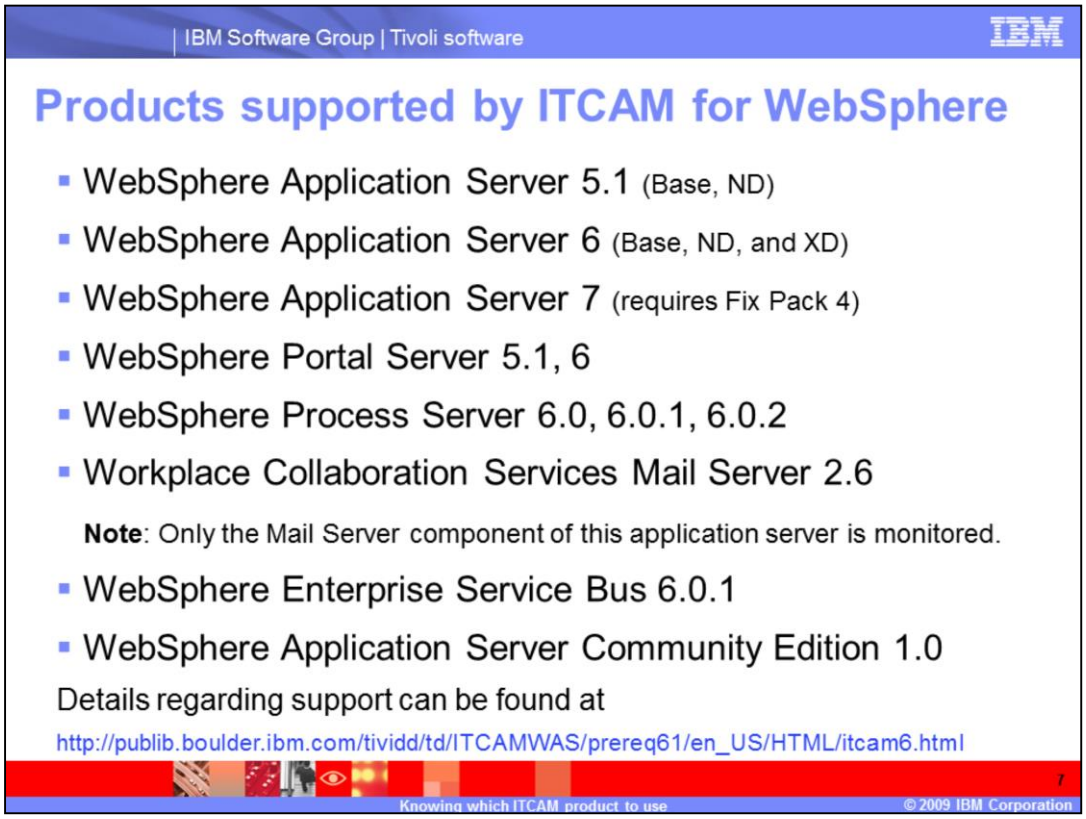


ITCAM for WebSphere has two user interfaces.

Because ITCAM for WebSphere was originally a stand-alone product, it has its own user interface. In this interface, you can watch in-flight, that is, active transactions. You can interact with the transactions by reprioritizing, suspending, or stopping a thread. You can set a trap. For example, if a method takes longer than X milliseconds, capture the stack trace leading up to that method. This detailed information is available only in the native interface.

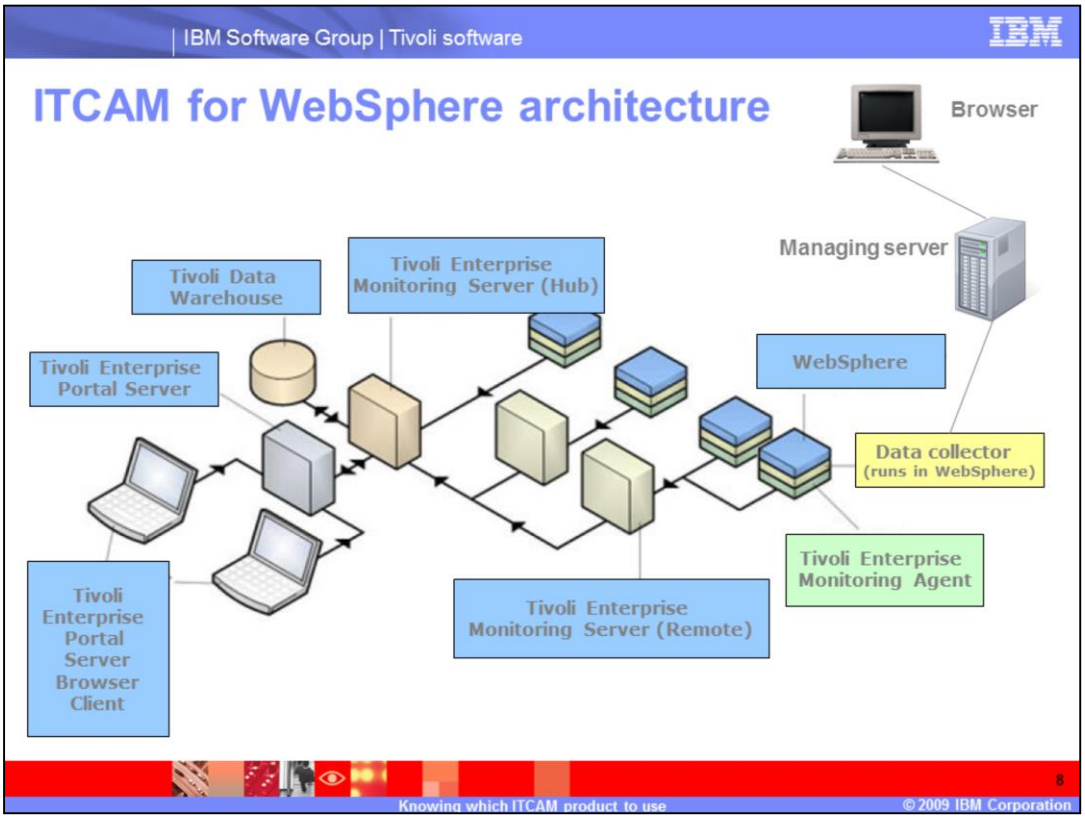
The native interface is called the Visualization Engine (VE). It is a component of the Managing Server. It provides J2EE resource usage monitoring, traps and alerts, and stack dumps. It can also show delays caused by lock contention.

ITCAM for WebSphere was modified to integrate with IBM Tivoli Monitoring. The portion available through the Tivoli Enterprise Portal is the subset that became ITCAM for Web Resources.

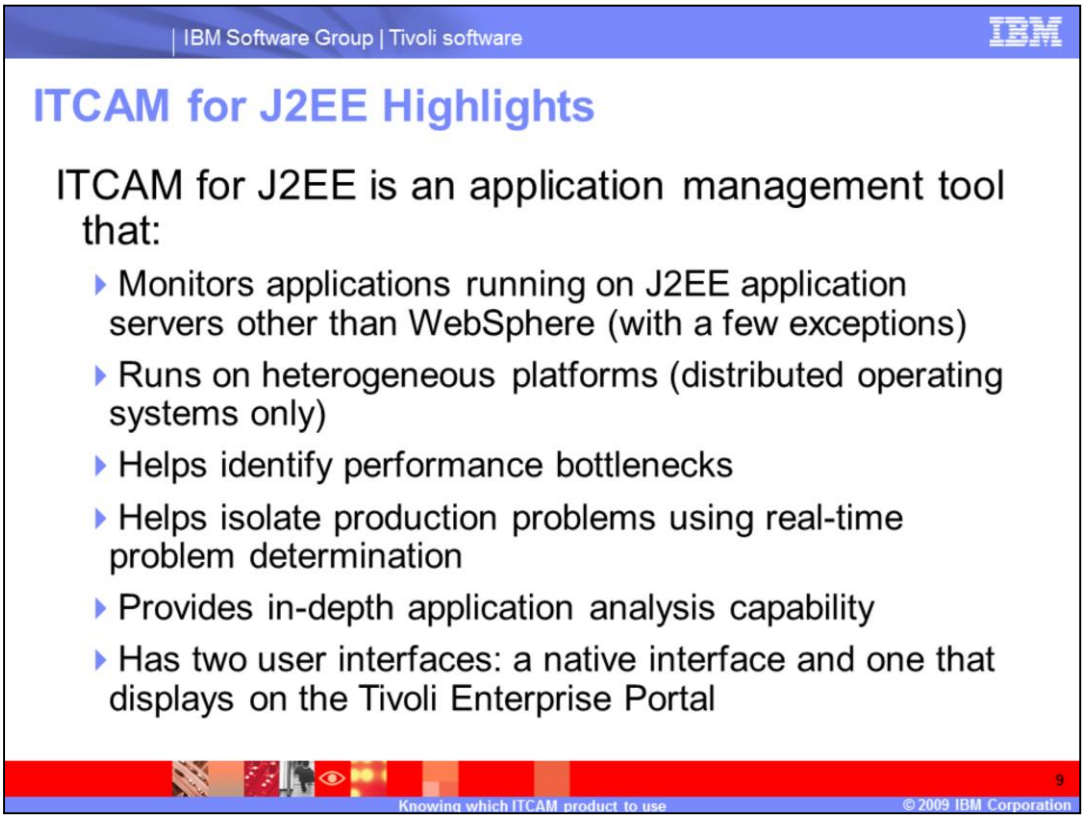


These are the WebSphere products supported by ITCAM for WebSphere. Notice that you can go online for the latest information for supported products at:

http://publib.boulder.ibm.com/tividd/td/ITCAMWAS/prereq61/en_US/HTML/itcam6.html

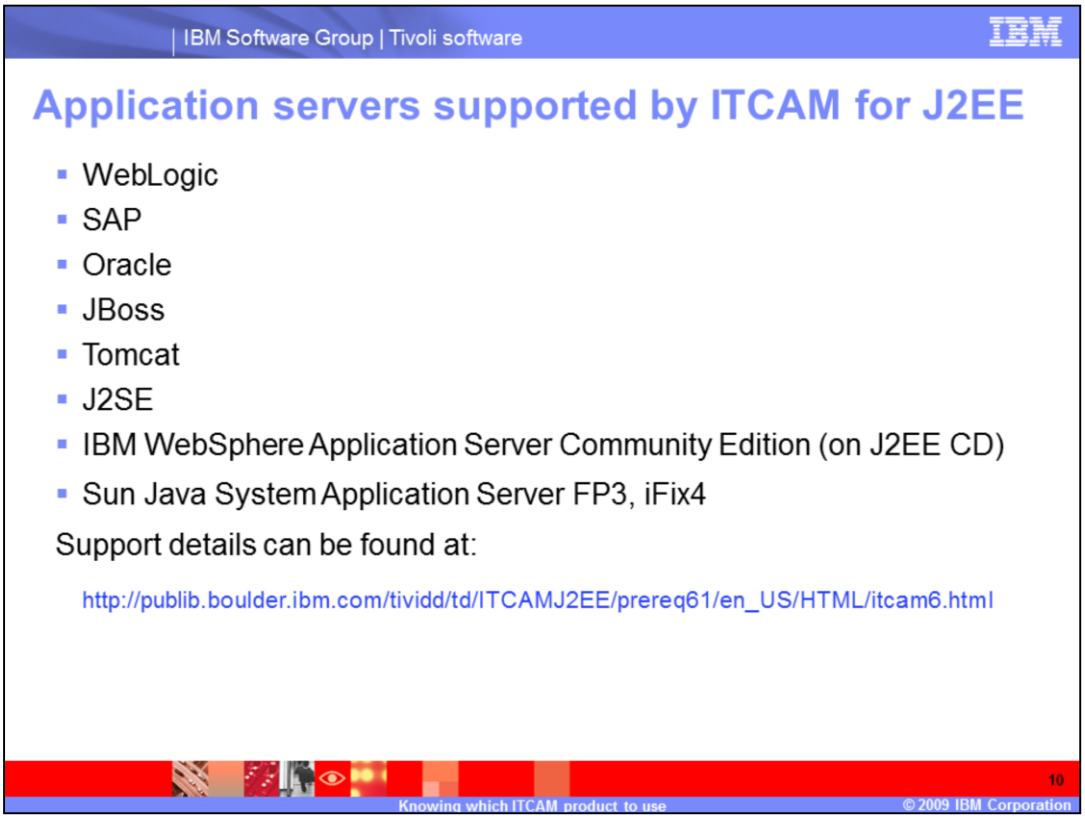


This diagram shows the ITCAM for WebSphere architecture. Notice that it has a Managing Server, which is one of the biggest differences between it and ITCAM for Web Resources relative to the architecture.



ITCAM for J2EE is essentially the same as ITCAM for WebSphere, except that it works on application servers other than WebSphere. It is an application management tool that monitors applications running on J2EE application servers other than WebSphere (with a few exceptions).

It runs on heterogeneous platforms, but on distributed operating systems only, no z/OS. It helps identify performance bottlenecks. It helps isolate production problems using real time problem determination. It provides in-depth application analysis capability. It has two user interfaces: a native interface and one that displays information on the Tivoli Enterprise Portal.



These J2EE application servers are supported by ITCAM for J2EE:

-- WebLogic

-- SAP

-- Oracle

-- JBoss

-- Tomcat

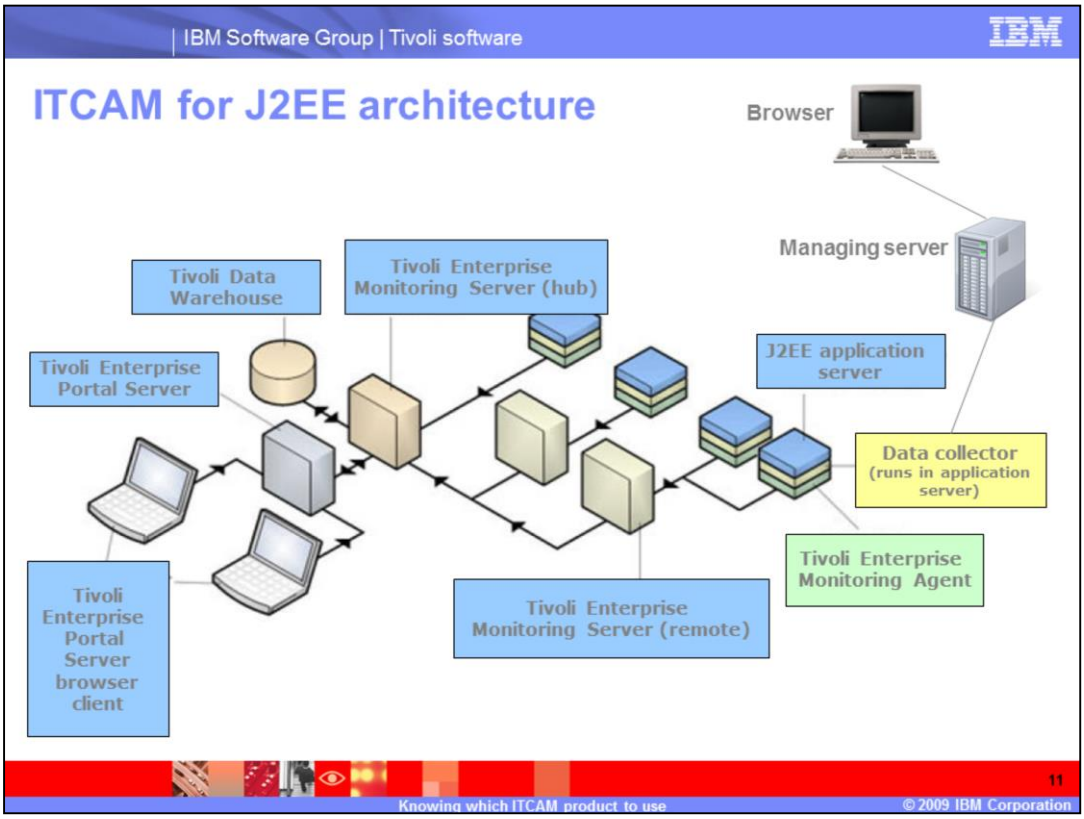
-- J2SE

-- IBM WebSphere Application Server Community edition (on the J2EE CD)

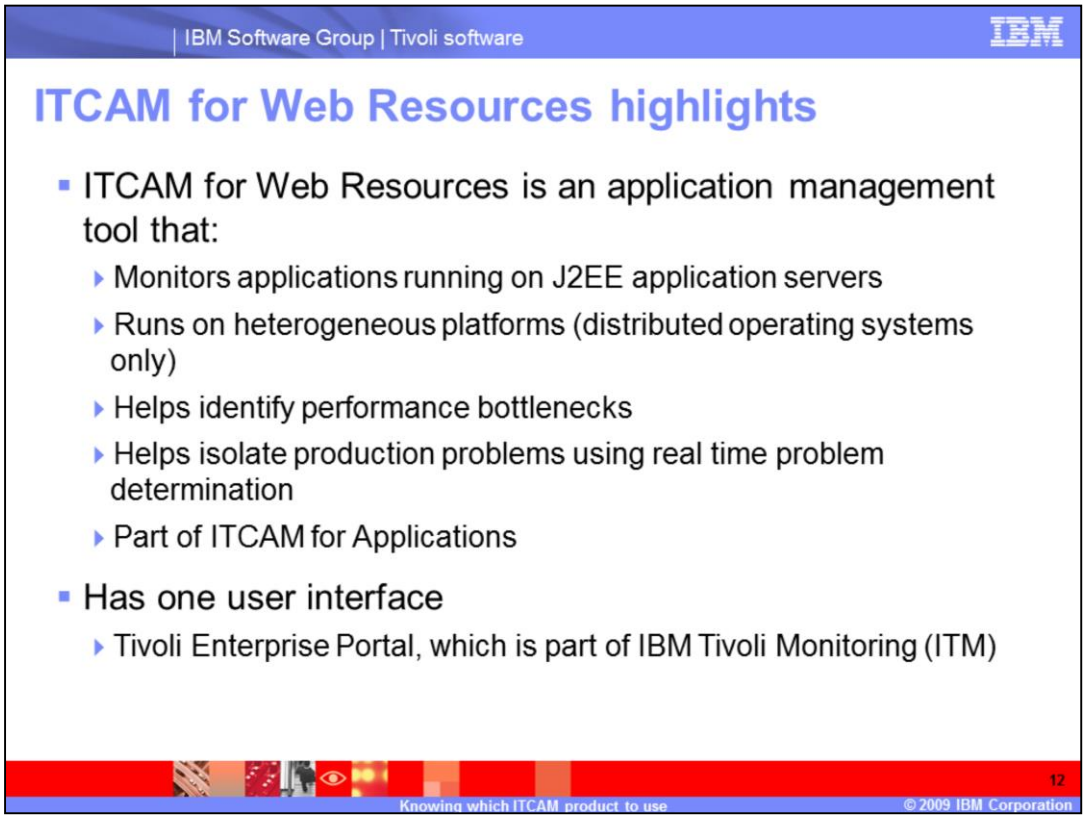
-- Sun Java System Application Server FP3, iFix4

Support details can be found at:

http://publib.boulder.ibm.com/tividd/td/ITCAMJ2EE/prereq61/en_US/HTML/itcam6.html



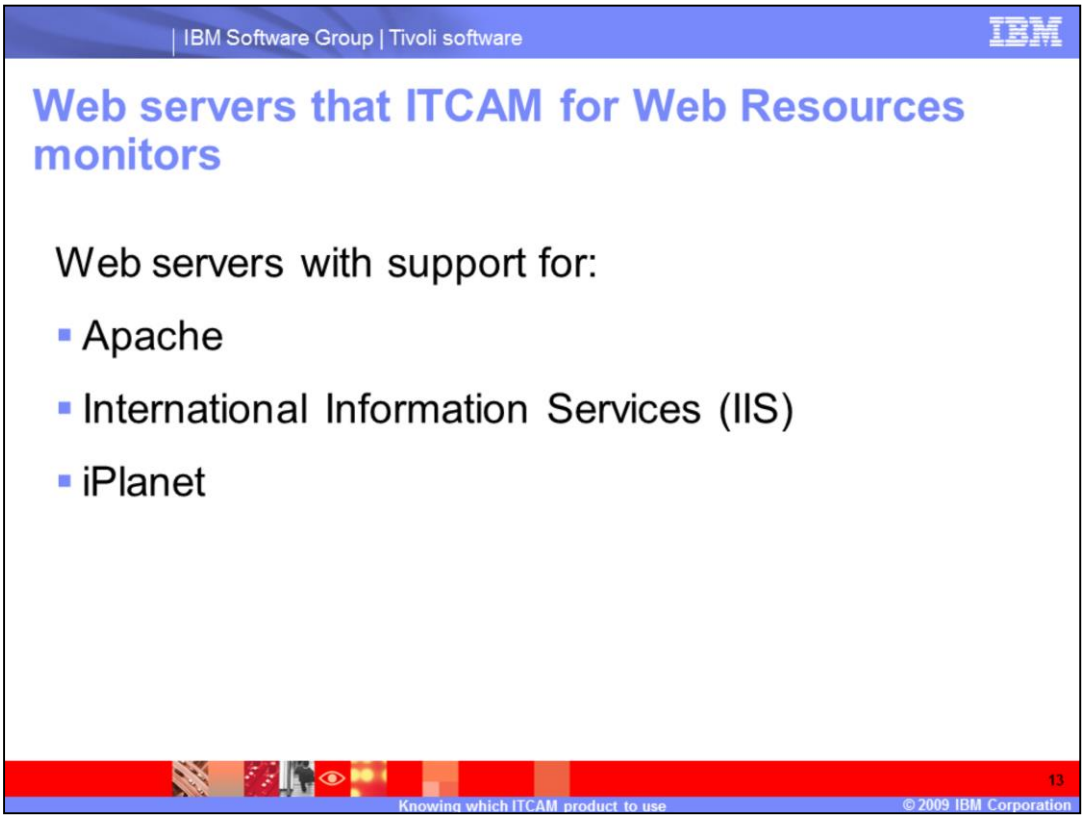
ITCAM for J2EE has the same architecture as ITCAM for WebSphere, with the exception that it works on J2EE Application Servers other than WebSphere.



After ITCAM for WebSphere was integrated into the IBM Tivoli Monitoring infrastructure, there was demand for just the subset of information available through the Tivoli Enterprise Portal. ITCAM for Web Resources was created to meet this demand.

The product is an application management tool that monitors applications running on J2EE application servers. It runs on heterogeneous platforms, distributed operating systems only. It can be used to identify performance bottlenecks and to isolate production problems using real-time problem determination. But it cannot go down into the application. It is now part of ITCAM for Applications 6.2.1.

It has one user interface, the Tivoli Enterprise Portal, which is part of IBM Tivoli Monitoring.

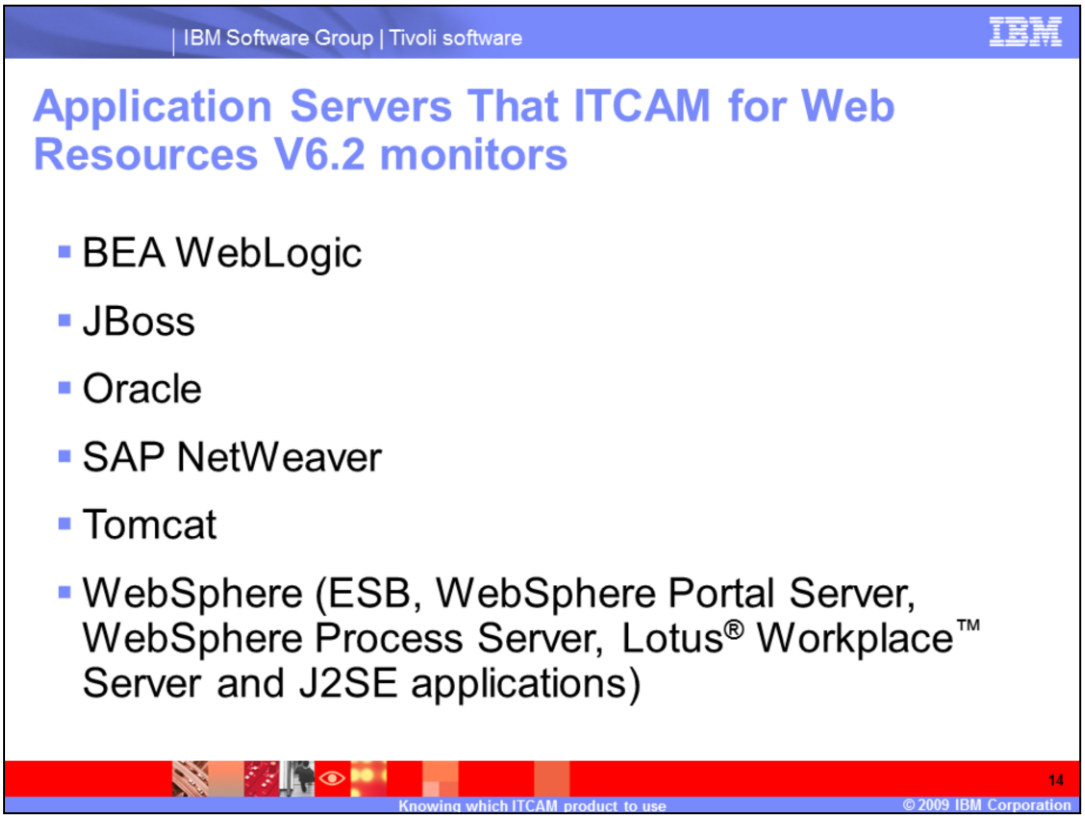


ITCAM for Web Resources can monitor these Web servers:

-- Apache

-- International Information Services (IIS)

-- iPlanet



ITCAM for Web Resources can monitor these application servers:

-- BEA WebLogic

-- JBoss

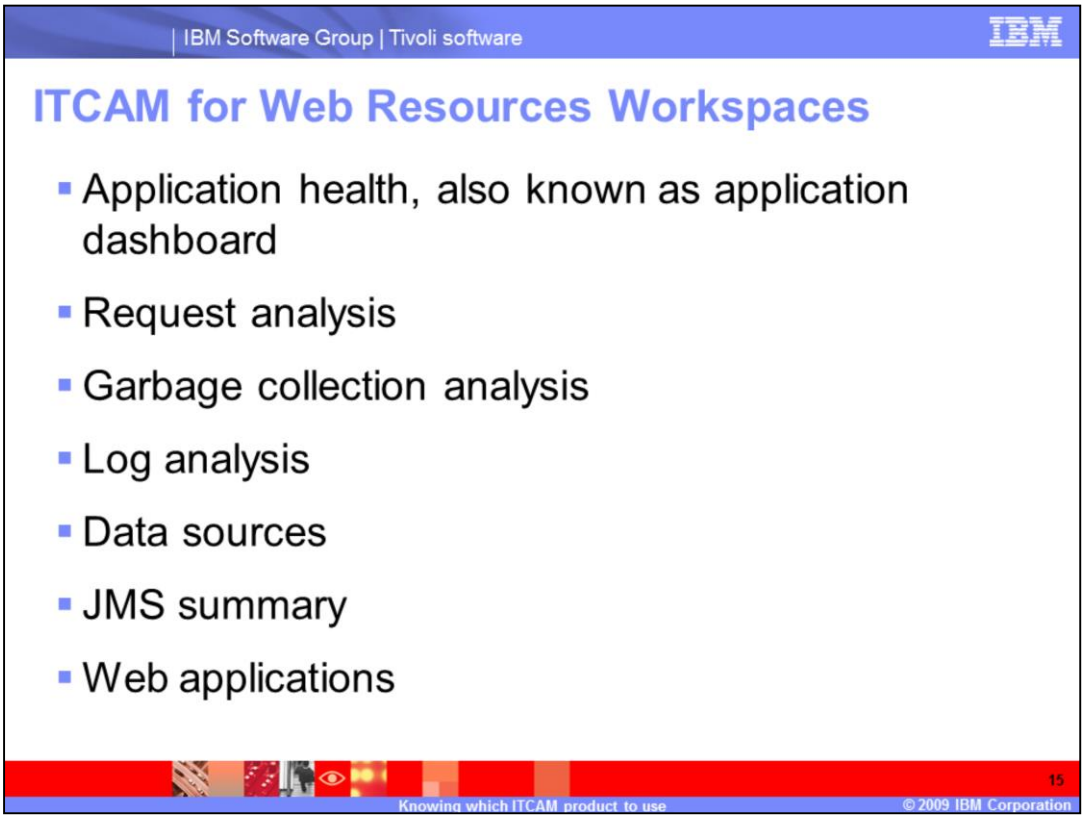
-- Oracle

-- SAP NetWeaver

-- Tomcat

-- WebSphere

In addition to the platforms listed in the previous slide, IBM Tivoli Composite Application Manager for Web Resources V6.2 provides workspaces for WebSphere Enterprise Service Bus (ESB), WebSphere Portal Server, WebSphere Process Server, Lotus Workplace Server, and Java 2 Platform Standard Edition (J2SE) applications.



ITCAM for Web Resources has these workspaces:

-- Application Health workspace, also known as the application dashboard. The operations staff can obtain a quick view of the over all health of the application.

-- Request Analysis displays response times for requests (servlets, JavaServer Pages files, and EJB methods).

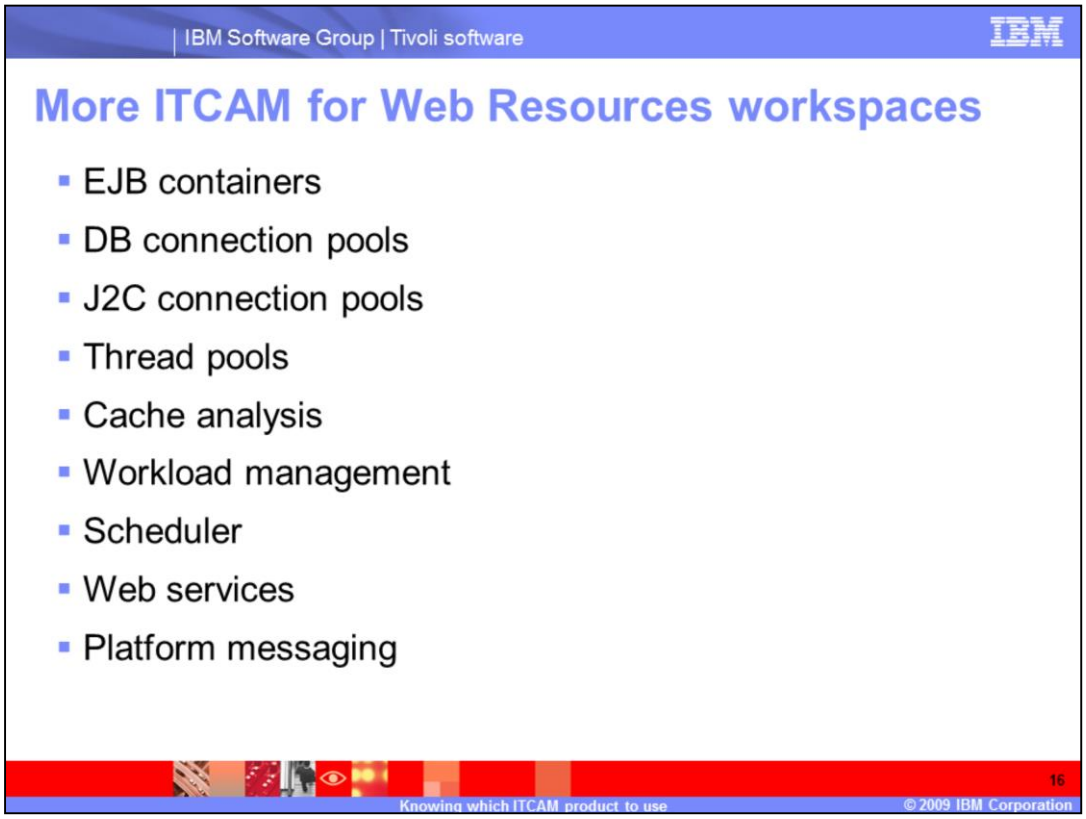
-- Garbage Collection Analysis displays information about the Java Virtual Machine garbage collector such as the number of time garbage collection ran and the number of objects freed.

-- Log Analysis displays application server error and exception conditions.

-- Data Sources displays statistical data for the data sources that your applications reference when accessing databases.

-- JMS Summary displays information about Java Message Service (JMS) message queues.

-- Web Applications displays information about Web application running in J2EE application servers such as worst response time, most popular Web applications, and worst error rates.



ITCAM for Web Resources has these workspaces:

-- EJB containers displays aggregated information about each defined EJB.

-- DB connection pools displays information about the database connection pool for each defined data source, for example, the number of threads waiting for a connection.

-- J2C connection pools displays information about connectors that adhere to J2C, the WebSphere Application Server implementation of the J2C architecture.

-- Thread pools displays information about the thread pools running in your Java Virtual Machine, for example, the high average pool size.

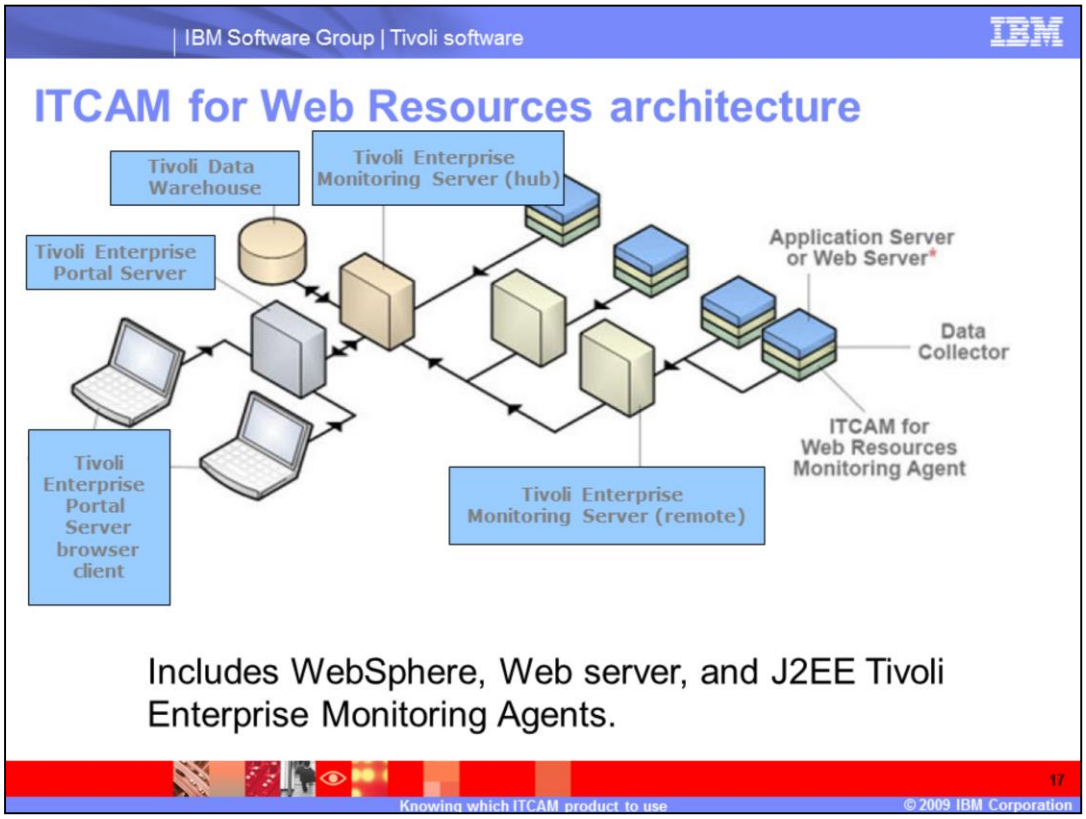
-- Cache Analysis display information about the dynamic cache. Tuning the dynamic cache can improve application performance.

-- Workload Management displays information about the optimization of processing tasks.

-- Scheduler displays information about the scheduling, and the starting and stopping of applications.

-- Web services displays information about the number of Web services and requests, the request response time, and the average size of requests.

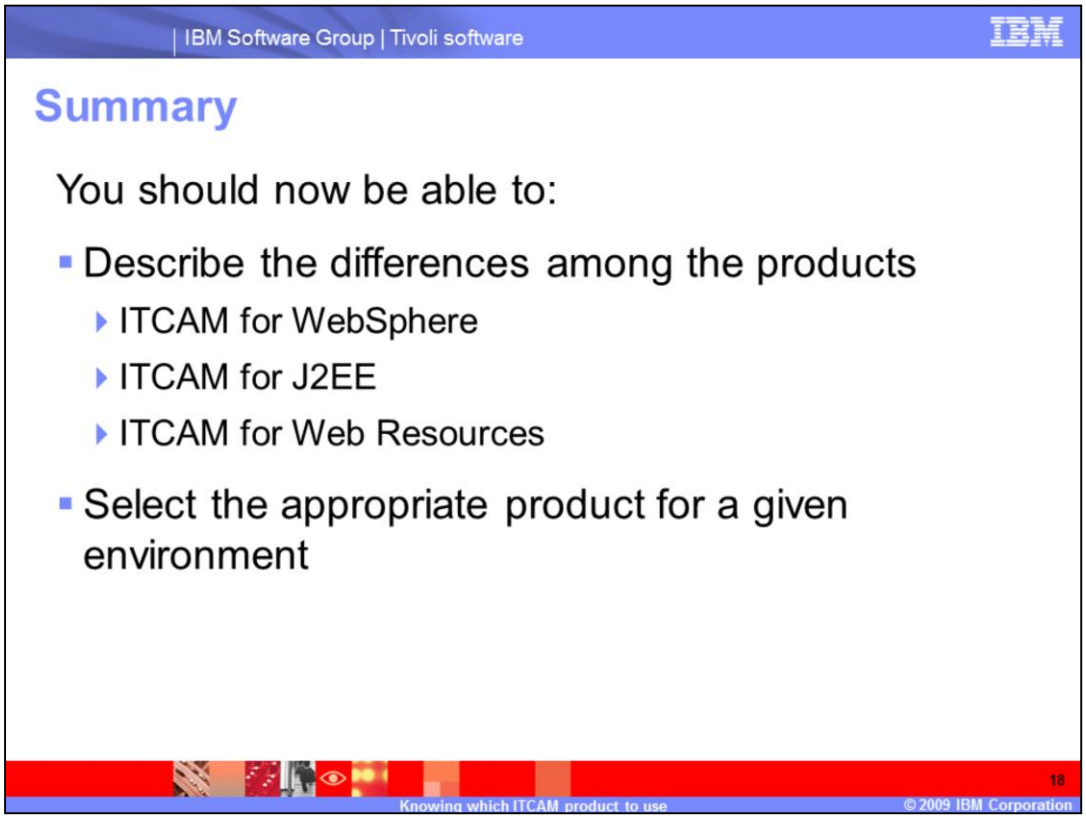
-- Platform messaging displays information about the messaging engine.



This is an architectural diagram of ITCAM for Web Resources. IBM Tivoli Monitoring is a required prerequisite because the Tivoli Enterprise Portal is the only user interface.

The application server Data Collectors are the same as are used in ITCAM for WebSphere or ITCAM for J2EE.

The Web server, Tivoli Enterprise Management Agent, does not have a Data Collector.



In summary, the main differences between ITCAM for WebSphere and ITCAM for J2EE are the application servers that they monitor. The main difference between both of those two products and ITCAM for Web Resources is the level of detail, and therefore the audience, for each product.

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