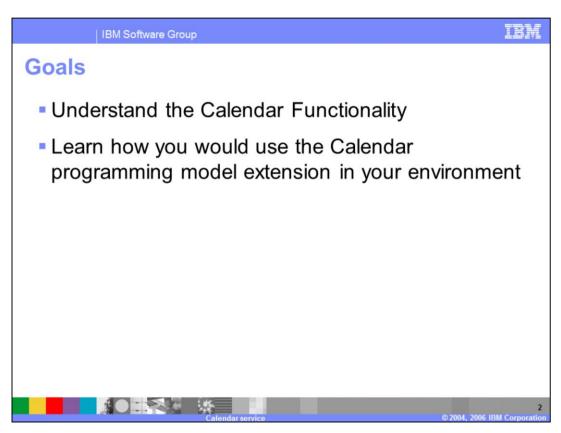


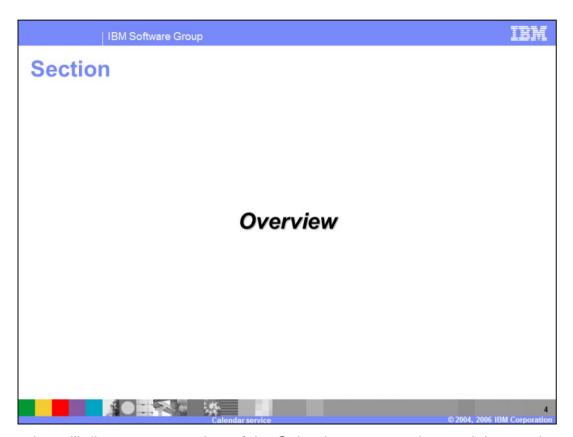
This presentation will discuss the Calendar programming model extension.



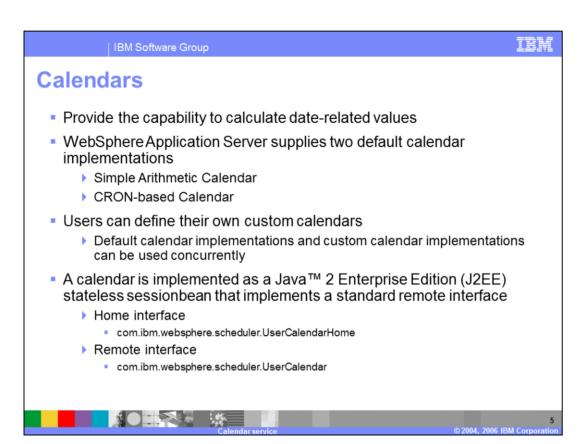
The goals for this presentation are to understand the functionality provided by the Calendar programming model extension and how you would use it in your environment.



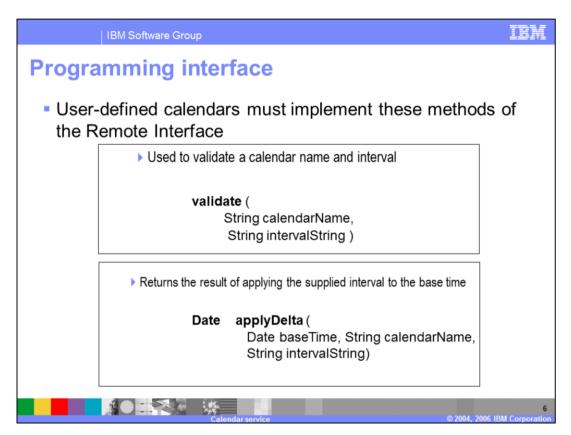
This presentation provides an overview of the Calendar functionality. It also provides a description of the programming model and implementation, including the two default calendars provided in WebSphere Application Server.



This section will discuss an overview of the Calendar programming model extension.



Calendars provide the capability to calculate date-related values. WebSphere Application Server V6 supplies two default calendar implementations; a simple arithmetic calendar and a CRON-based calendar. You can provide your own calendars by writing a custom J2EE stateless sessionbean that implements the UserCalendarHome and the UserCalendar interfaces.

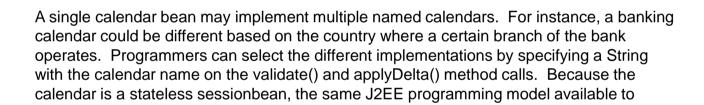


The UserCalendar remote interface exposes two methods, the validate method and the applyDelta method. The validate method is used to validate a calendar name and interval. The applyDelta method returns the result of applying the supplied interval to the base time.

#### Calendar implementations

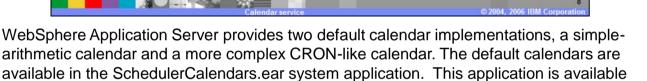
other sessionbeans is also available to the calendar.

- A single calendar bean may implement one or more named calendars
- Each calendar implemented by a bean has a unique String name
  - specified on the validate() and applyDelta() methods
- The full J2EE programming model is available to a calendar bean as it is simply a stateless session bean

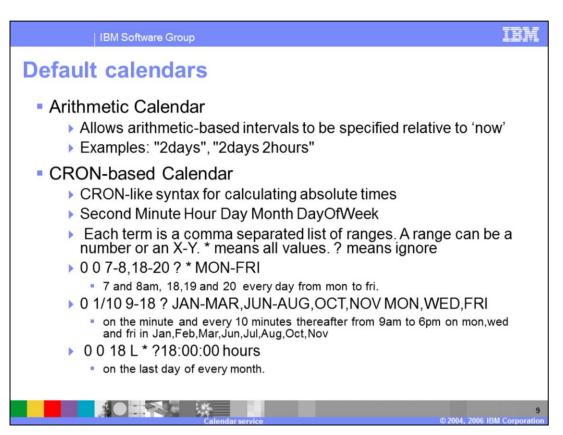


# Calendar implementations (cont.)

- WebSphere Application Server provides two default calendar implementations
  - One allows simple arithmetic type intervals to be specified
  - The other allows more complex CRON-like intervals to be specified
- Default calendars are provided in the SchedulerCalendars.ear system application



on all WebSphere Application Server V6 servers. These two default calendars are discussed on the following page.



Two default calendars are provided by WebSphere Application Server. The arithmetic calendar allows you to add simple time intervals to a date object.

The CRON-based calendar accepts more sophisticated interval definitions, based on the CRON standards that are familiar to UNIX® developers.

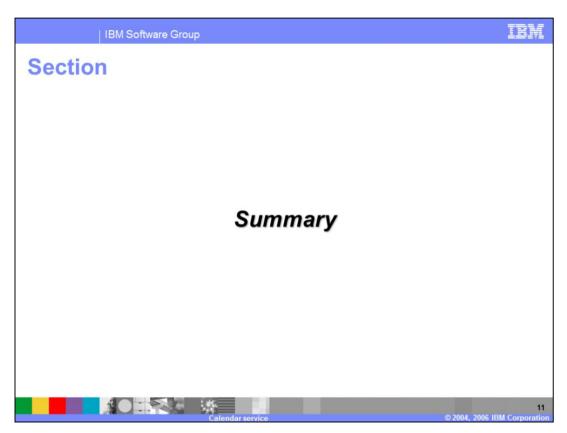
### **Deployment**

 Calendars are deployed in an Enterprise Archive (EAR) file, just like any other stateless session bean

- Are retrieved by applications using JNDI names
- Can be clustered for availability and load balancing
- The Scheduler service allows for a pluggable calendar mechanism
  - Scheduler can utilize custom UserCalendar implementations
  - referenced by Scheduler using the setUserCalendar method on the TaskInfo interface



Calendars are stateless sessionbeans and are treated as such when it comes to packaging, deployment, and usage. They are deployed in an Enterprise Archive (EAR) file. Calendars are retrieved by applications using Java Naming and Directory Interface (JNDI) names. They can also be clustered for availability and load balancing. The scheduler service allows for plugging in custom-defined calendars. Businesses and localities may have very sophisticated calendar requirements, where local holidays, company customs, and variations in the duration of work periods need to be taken into account. A user-defined custom calendar will then be used by the scheduler to compute a point in time in the future based on a specified interval.



This section will provide a summary of the Calendar programming model extension.

## **Summary**

- Calendars provide the capability to calculate daterelated values
- WebSphere Application Server provides two default calendar implementations
- Users may provide their own custom calendars
- Calendars are J2EE stateless sessionbeans



In this presentation you learned about the Calendar programming model extension. Calendars provide the capability to calculate date-related values. WebSphere Application Server provides two default calendar implementations, a simple Arithmetic calendar and a more complex CRON-like calendar. You may also implement your own user-defined custom calendar. Calendars are J2EE stateless sessionbeans; therefore, they have the full J2EE programming model available and they follow the J2EE deployment model.



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