

# IBM Workplace Client Technology

## Powering Managed Client Solutions

Richard Wilson, Architect  
IBM Lotus Workplace Development  
[Richard\\_Wilson@us.ibm.com](mailto:Richard_Wilson@us.ibm.com)

# Agenda

- IBM Workplace Client Technology Platform Overview
- Lotus and Eclipse Working Together
- Managed Application Examples
- High-level Architecture Overview
- Demo
- Forward Pointers
- Summary
- Q&A

# IBM Workplace Client Technology

**Goal:** Provide an Eclipse-derived enterprise platform with reusable components and services to support applications built by IBM, end customers and other providers.

## Themes

- Component Reuse
- Embrace and Extend
- Shared Platform
- WebSphere Affinity
- Client Services

## Design Principles

- Use what Eclipse provides
- Extend rather than modify
- Work closely with Eclipse team
- Avoid forking code bases
- Propose back to Eclipse core

# Motivation – Beyond the Browser

- Desktop and OS Integration
  - Full participation to operating system UI infrastructure, events and metaphors
- Highly-interactive extensible platform
  - Client-side processing and caching
  - More responsive user experience
  - Lower server loads
  - Offline execution
  - Local data access
- All this with administration characteristics of a web experience
  - Central server-based application provisioning and policy
  - All the usual benefits associated with Portal application management
  - Now also applied to desktop applications
- Low total cost of ownership

# How does the platform achieve a low TCO?

- Provides central management and specification of client configuration
  - Users are provisioned on server
  - Applications are defined on server
  - Services are run on server
  - Access control is applied on server
- Employs a componentized client infrastructure and application components
- Leverages update manager for retrieving the component configuration set
- Supports downloadable components for new and upgrade installs
- Limits access to those components that a user has been granted permission to use
- Offers a management system that overlaps with that of the browser

# IBM Workplace Client Technology

- Provides extension services layer for Eclipse RCP
- Extends the enterprise managed environment to the end user device
- Targeted for use across IBM
- Platform for custom applications
- Self-provisioning Managed Client
  - Client configuration defined on server
- Low Total Cost of Ownership
  - Centrally managed aggregation and deployment
- Cross Platform
  - Linux is fully supported
- Rich Set of Client Services
  - Robust programming model

# Benefit: Eclipse as Foundation

- Cross platform, rich UI widget set based on native widgets
- Rich UI framework
- Predefined dialog basis: Wizards, Preferences, Properties
- Other UI: Perspectives, Views, Editors, Workbench (as a base)
- ActiveX support in SWT on Win32 (platform integration)
- Help system
  
- Extensible Platform
  - Plug-in extensibility model
  - Shared programming model with tools development
  - Education already developed for tools offerings
  - Core services, extension points
  - Core frameworks
  
- Production quality platform with 2 major releases in market
- Open Source code base

# Lotus and Eclipse Working Together

- Lotus joined the Equinox Technology Project and is contributing in the following areas:
  - Alternative Runtime
  - Dynamic Plug-in support
  - Dynamic component provisioning
  - Security Models
  
- Lotus is contributing code in Eclipse 3.0 toward the RCP theme
  - Support for general desktop applications
  - New application focused UI components
  - Enhanced Workbench customization
  - Dynamic UI components

# Lotus Workplace

- Lotus Workplace -- a new innovation for collaboration and human interaction
  - Improved responsiveness
  - Improved productivity
  - Reduces Total Cost of Ownership
  - Connects Geographically Dispersed Teams
- Workplace server is based on WebSphere Portal and DB2
- Diverse customer base requires more than one client type
  - Browser, Rich Client, and Mobile
- Workplace applications can be projected to multiple client device types

# Workplace Mail Application

The screenshot displays the IBM Lotus Workplace Mail Application interface. The main window is titled "IBM Lotus Workplace" and includes a menu bar (File, Edit, View, Actions, Tools, Help) and a search bar. The interface is divided into several panes:

- Messages:** Shows a list of folders (Inbox (7 new), Drafts, Sent, Outbox (3), Trash, My Folders, Folder One, Folder Two (17), My Chats, My Calendar, My Address Book) and a "Links" section with items like Learning Center, Team Spaces, Web Conferences, My Web Links, w3.ibm.com, and helpdesk website. A "People" section includes a "People Finder" and lists contacts under "Work (2)" (Rami Menashes, Harry Hornreich, wpsadmin/ibm) and "Friends (2)" (Galina Rubinstein, Avi Bino).
- Inbox:** A table of messages with columns for From, Subject, Date, Time, and Size. The selected message is from Mike Rowles, dated 12/11/03 at 9:26, with a size of 4947. The subject is "Re: Vulcan wants longer contract".
- Message Preview:** Shows the content of the selected message: "Re: Vulcan Plastics wants longer contract", dated December 12, 2003 at 7:05am. It lists the sender as Mike Rowles and recipients as Frank Pavelski and Laura Hanson. The body text reads: "Mike, Vulcan has asked us to consider a longer term contract than the current single year contracts several years. they have a new raw materials supplier that could lower our costs but also commitment to their supplies."
- Calendar:** Shows a daily view for Thursday, December 11, 2003. Events include "Work with Joe today", "Weekly checkup with QWW team" at 10:00 am, "One on one with Terry" at 1:30, and "QWW call" at 2:00. A monthly view for December 2003 is also visible, with the 11th highlighted.

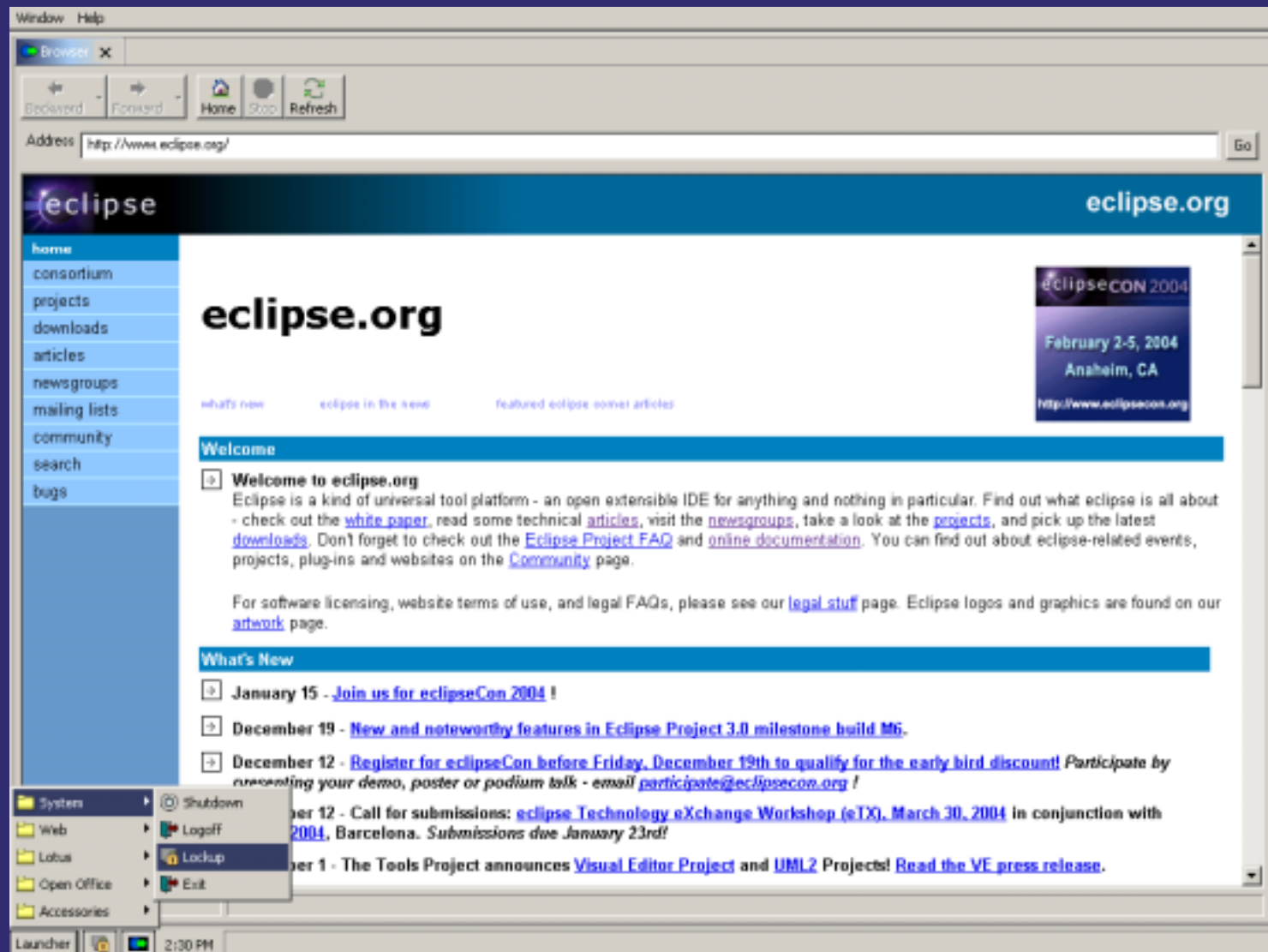
The status bar at the bottom indicates "Synchronizing...", "Stop Synchronizing", "Online", and "I am available".

# Client Integrator

## Based on IBM Workplace Client Platform

- Locked-down desktop with managed applications
- Cross-platform – will support Windows and Linux
- Native look-and-feel through eclipse SWT widgets
- “Dashboard” launcher provides admin controlled access to local applications and system functions on client (e.g. screen lock, logoff, shutdown, etc)
- Provides an admin-controlled restricted browsing environment
  - Kiosk-mode to “simple” browser UI (basic navigation controls)
- Will allow seamless integration of Lotus Workplace 2.x components into the CI desktop
  - E-mail and Collaboration

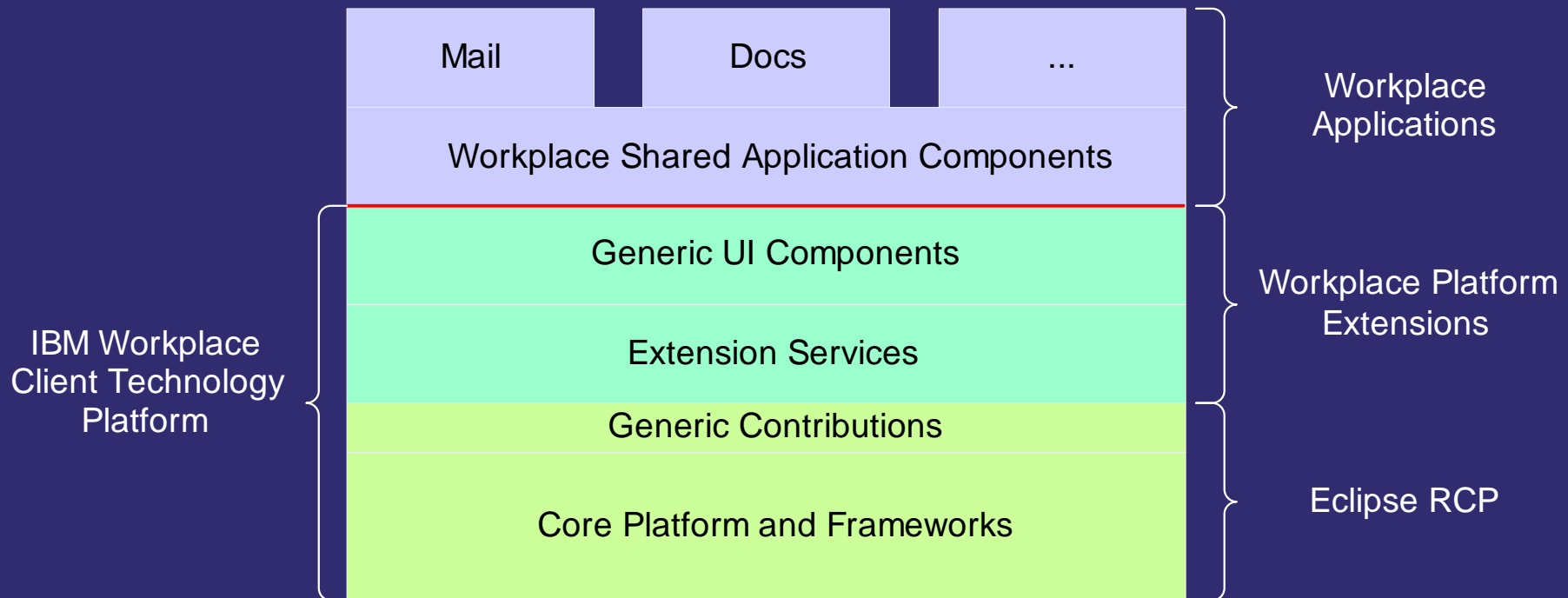
# Client Integrator Application



# Architecture Overview

# IBM Workplace Client Technology Conceptual Stack

## IBM Workplace Client Technology Platform and Applications



# Eclipse RCP and Lotus Generic Contributions Layer

- This is a layer for any Lotus add-on generic components that are in the proposal pipeline for inclusion in a future Eclipse release.
- Examples of work areas include:
  - System tray integration
  - Alert Bubble integrated to desktop
  - Generalized status bar
  - Post-install configuration
  - Workbench themes
  - Multi-view instancing
  - Action bar with custom rendered buttons
  - Locked-down desktop
  - Dynamic plug-ins

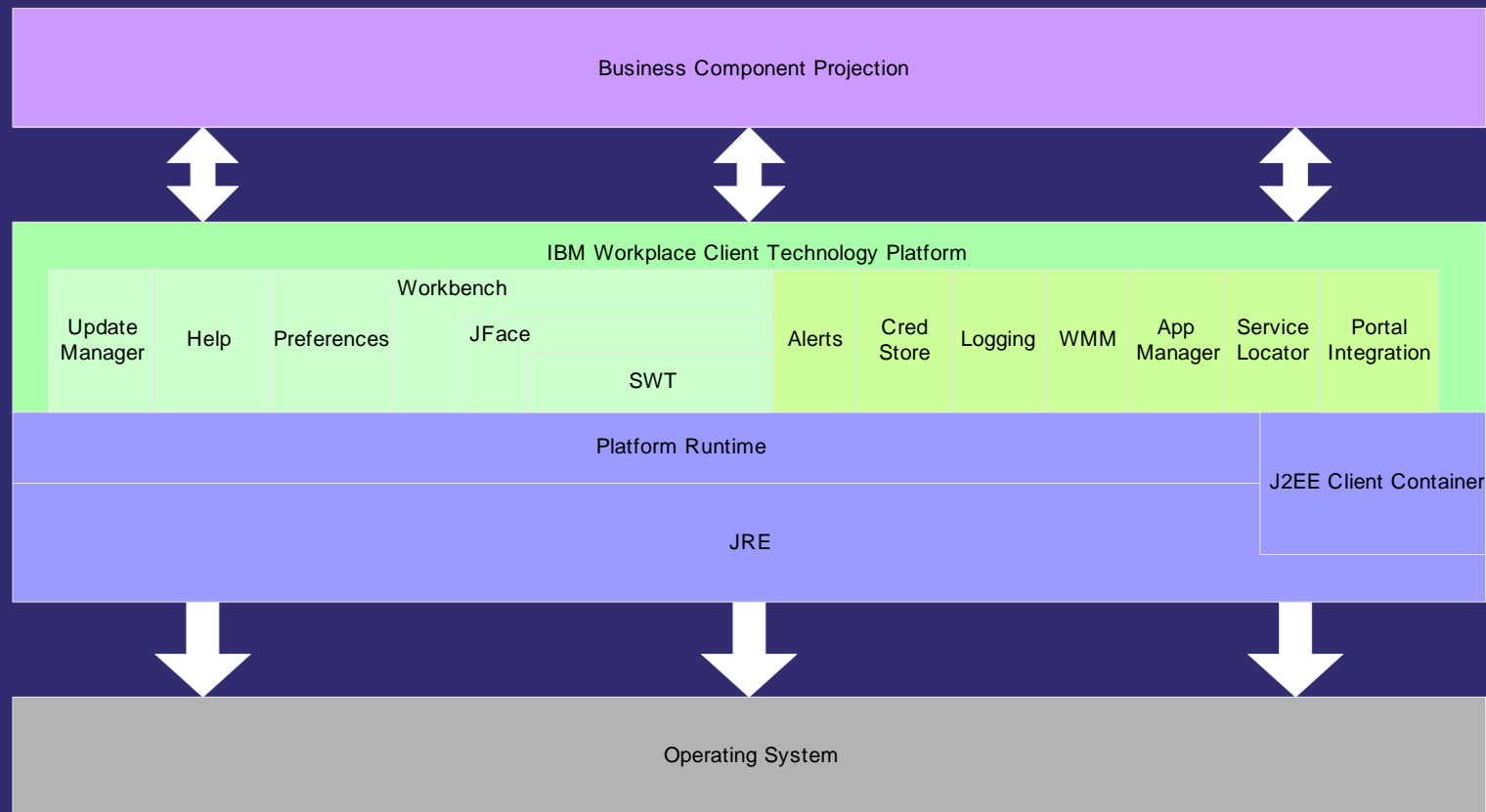
# Extension Services Layer

- Lotus enterprise client value-add services reside in this layer. Many client extensions have server counterparts.
  
- Example services include:
  - Portal Integration
  - Remote Preferences
  - Credential Store
  - Single Sign-on with the Operating System
  - Managed Store
  - WSRP Consumer
  - WMM
  - J2EE Client Container and Services
  - Replication
  - Disconnected Support

# Generic UI Components

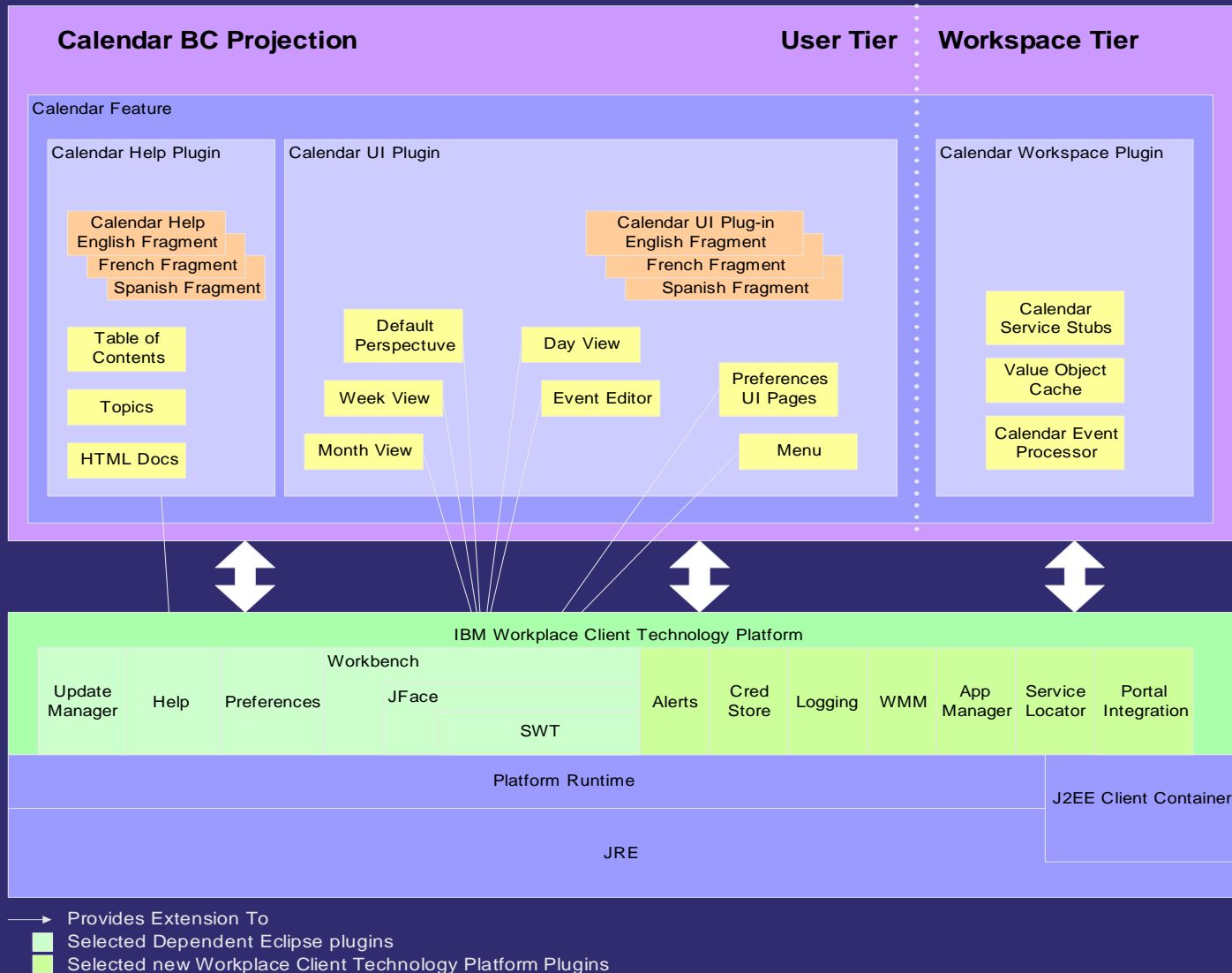
- UI components that reside in this layer are generic, tie into extension services, and can be used in applications built by IBM, end customers and other providers.
- Example components include:
  - WSRP Viewer
  - RTE based on SWT Browser
  - Managed Store Explorer Viewer
  - Live Names
  - View Intercommunication (client-side broker)
  - Custom Table Widget

# IBM Workplace Client Technology Platform High-level Architecture



- Selected Dependent Eclipse plugins
- Selected new Workplace Client Technology Platform Plugins

# Workplace Business Component Projection Example



# IBM Workplace Client Technology Component Provisioning

## Use cases

- Add new plug-ins dynamically at runtime without a restart
  - Additive update model – hot deploy
- Update plug-ins dynamically at runtime
  - Replacement update model – hot swap
- Policy and Options
  - Silent install
  - Push install
  - Background install
  - Update scheduling

## Alternative Solutions

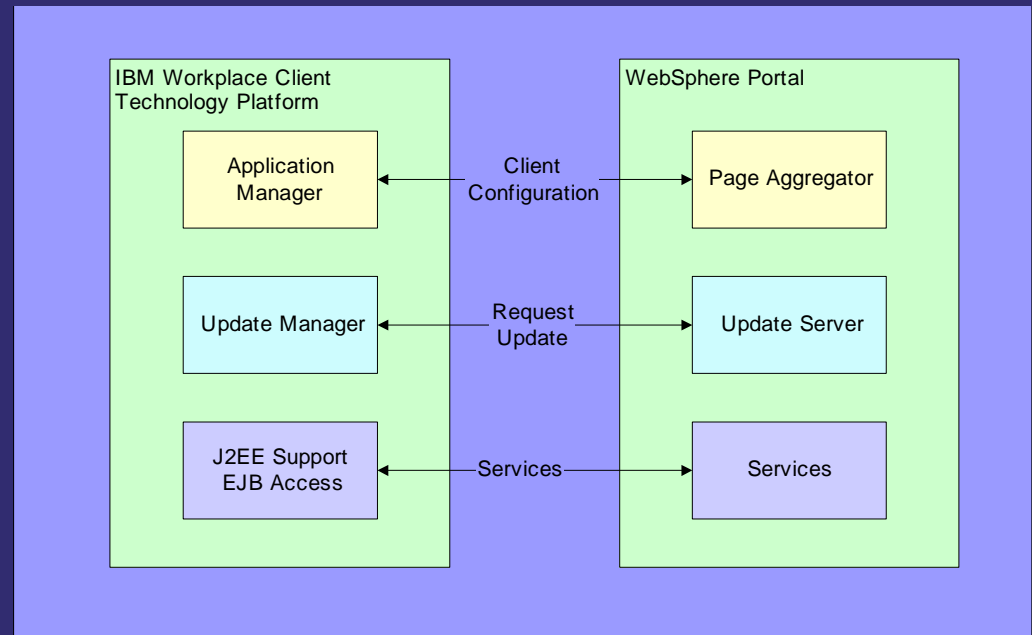
- The standard Eclipse Update Manager
- Tivoli management solution

# Driving Workplace Client Configuration from Portal

- Portal has a robust and powerful programming model
  - Leverage portal and programming model to drive client
  - Pages map to Workbench perspectives
  - Portlets map to Workbench views
- Application manager requests pages and coordinates update and perspective creation
- Portal generates component assembly markup for new client device type
- Update manager is consulted to ensure required components are available on the client
- Dynamic perspectives are created based on markup and rendered for use

# Example Component Provisioning Communication

- Application manager request client configuration from server
- Update is run to fetch new and updated components
- Services are used to access and update data on the back end
- Perspectives are dynamically built and rendered to user



# Demo

# Resources

- Eclipse.org – [www.eclipse.org](http://www.eclipse.org)
- Lotus Workplace – [www.lotus.com/workplace](http://www.lotus.com/workplace)

# Summary: IBM Workplace Client Technology

- Self-provisioning Managed Client
  - Client configuration defined on server
- Low Total Cost of Ownership
  - Centrally managed aggregation and deployment
- Cross Platform
  - Linux is fully supported
- Rich Set of Client Services
  - Robust programming model

# Q & A