

developerWorks Article

Open Collaboration Client Solution Overview

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February 7, 2008

Overview

Abstract

Microsoft desktop alternatives have matured over the last few years due to market pressure and technology innovations in client middleware, application migration alternatives, and Linux distribution. Business and IT requirements range from needs to reduce cost, to a variety of desktop migration pressures. This article starts with these requirements and then introduce IBM Open Collaboration Client Solution architecture and associated strategy. A brief introduction to the solution components follows. A high level view of the OCCS Jumpstart method with associated processes and work products are discussed. We then examine key architectural decisions, value proposition, associated risks, and risk mitigation strategies based on lessons learned from customer implementations. This is part 1 of a three part series published in IBM Developerworks. Part 2 will address technical planning for desktop migration, and Part 3 will focus on end user segmentation and associated best practices.

Business and Non Functional Requirements

Cost: IBM open collaboration client solution helps customers reduce IT cost by introducing alternative desktop to end users. Customers are looking to non-Microsoft applications to meet the end users need while keeping the cost low. Open source applications are one alternative, but corporate customers need enterprise level support to make sure that their operations are up 24x7. IBM solution plays well within this area by providing enterprise level support and keeping IT cost at lower levels.

Migration to Vista/Office 2007: As most of the customers were working on 3-year hardware rotation, Vista upgrade was a challenge at its time of arrival. The new operating system version requires more memory and higher CPU power to keep the work flow going. For an average there were few hurdles before they would have upgrade. First was to bring up to speed worker force with new functions and features. Second was a major hardware upgrade to get the full benefits of some of Vista's new features, were hardly incentive to upgrade.

VB applications: Microsoft has announced sunsetting VB support end of 2008. This is bad news for customers who have already invested and locked in VB applications and are now forced to migrate to .Net. Such scenario has left customer to negotiate higher cost to get support for existing VB application. This has also locked customers into single operating system.

Proprietary formats: Government policy now mandates that documents such word, spreadsheet or presentation are public records, and therefore, should be created and stored in open formats. These documents should not tied to any single program for updates. This shift will help customers from single vendor locking and will create room for Microsoft desktop alternatives.

Non Functional requirements

Flexibility: Linux operating system is supported on a wide variety of hardware. IBM strategy towards Lotus client products is to support 2 Linux vendors or more with enterprise level support. This strategy offers customers to look into heterogeneous environment and lower the IT cost.

Reliability: Customers cannot afford downtime in production environments, so Linux operating reliability plays key role in the decision making. Today, Notes 8, ST 7.5.1, Lotus Expeditor are all supported on latest versions of Linux desktop.

Security: Linux has been proven to be more secure than Windows. There are big customers like Amazon, FedEx and Google have been using Linux for years. First time IBM has all major client

products supported on Linux Desktop ranging from email clients, IM clients, VPN client etc. As Customers pay more attention on security aspects, IBM has products offerings to meet the security demand on Linux Desktop.

Cost Reduction: Linux Desktops comes with various commercial grade applications which are part of operating system pricing. Linux Desktops are significantly less in price as compare to Windows operating system. User Segmentation can play an important role in Desktop select. If you have 10% of your user community which only access browser based application, in that case of the application is certified on Mozilla Firefox browser, then you can very quickly switch underline operating system of those 10% users to Linux Desktop. Such exercises can save companies tons of money. Another example can be usage of MS office application functionality per average user. If there is 60% of population who uses 20% of MS office application, then its very feasible to evaluate Lotus Symphony to see if this software can meet needs of 60% of the user population.

Control & Agility: We want our customers to have freedom to adjust the code to their needs. IBM products are all about open standards and meeting customers demands. Lotus Notes, Sametime Client, Lotus Expeditor are all based on open standards giving more freedom to the customer. It also helps ISV to develop applications to fit customers need without advocating any single proprietary solution.

Strategy

We have to have a strategy in place when considering Linux Desktop as an alternative to Microsoft Windows. This strategy will include picking up the right pieces of IBM software for your environment. Once you have gone through that exercise, you have to clearly divide users in small groups. Once the users are placed in groups, you have to start analyzing set of applications they are using on daily basis. There are number of alternative applications available today to meet end user needs. For example: users can easily switch to IBM Symphony which serves 80% needs of majority of the users. We have Firefox browser, Notes 8 client, Sametime client and other enterprise ready applications ready to serve end users. Once the applications are mapped to each group, its time to start a pilot within the group to test the strategy.

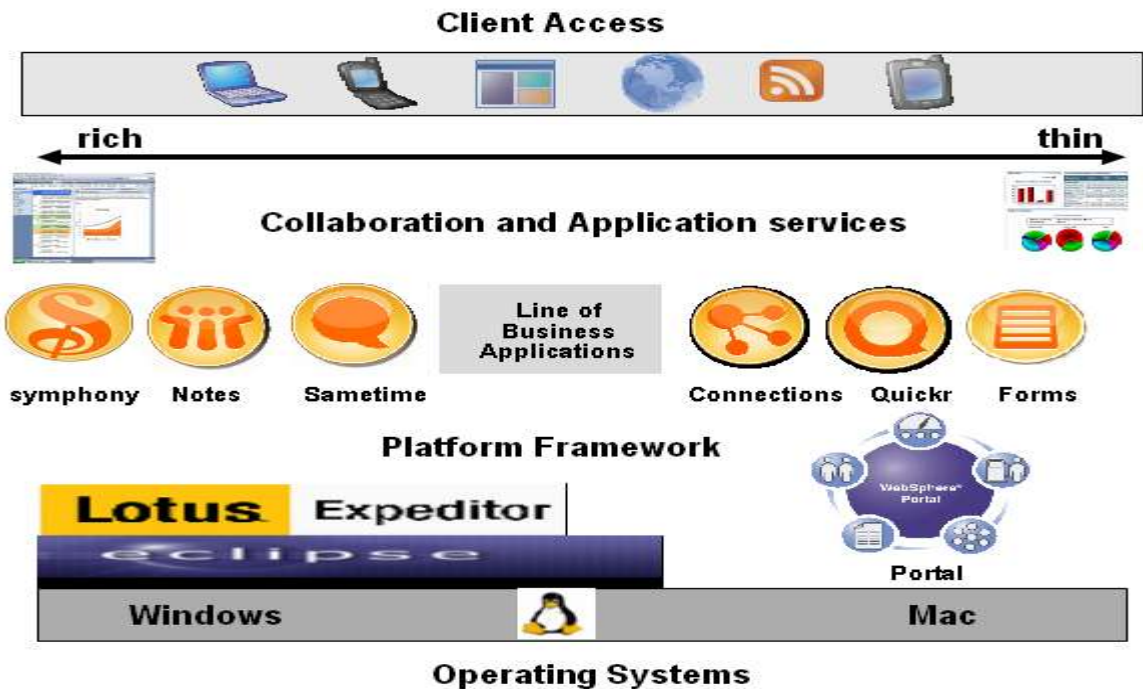
Solution Overview and Architecture

IBM's open collaboration client solution is a security-rich and cost effective Microsoft desktop alternative that provides flexibility, choice and an exciting opportunity to drive innovation on your desktop while helping you achieve a lower total cost of ownership. It gets you started towards desktops of the future, today.

1. Includes Lotus collaboration and communication software, productivity editors/Symphony, software services
2. Provides flexibility and choice: operating system, productivity editors, rich/thin client platform
3. Software includes email, calendaring, document/presentation/spreadsheet editors with ODF support, instant messaging/chat, VoIP, web conference, application development, role based aggregation of applications/information sources; rich client and integrated web browser (via existing Firefox or Microsoft Internet Explorer) user experience
4. Software services may include jumpstart, end user segmentation, value assessment, application migration, pilot management and deployment
5. Reduce the TCO for end user desktops
6. Business Partner application migration tools range from Diamond Edge and Mainsoft to Ericom/Win4lin/Citrix
7. Offers virtual client configurations based on user segmentation

Architecture:

Below is a architecture diagram of open collaboration client solution. Products listed in the picture are supported on Linux Desktop offered by RedHat and SUSE.



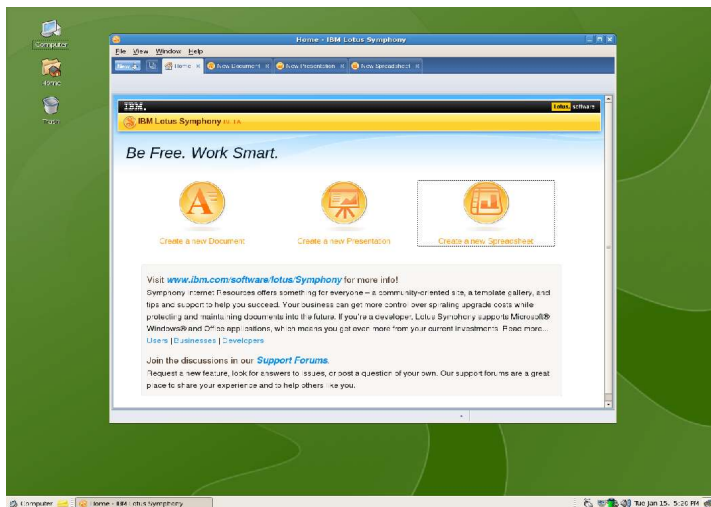
Solution Components

Lotus Symphony:

IBM recently announced Lotus Symphony, a suite of free software to create and share documents, SharePoint and presentations based on OpenOffice.org. Linux Desktops also come with OpenOffice.org 2.0 which is a complete office suite.

It doesn't matter which platform you prefer, Lotus Symphony is available for both Microsoft Windows and Linux operating systems, with support for the Apple Mac OS platform planned for the future. You can save your work in a variety of file formats, including Microsoft Office formats, and convert documents, spreadsheets and presentations into Adobe® Portable Document Format (PDF) files.

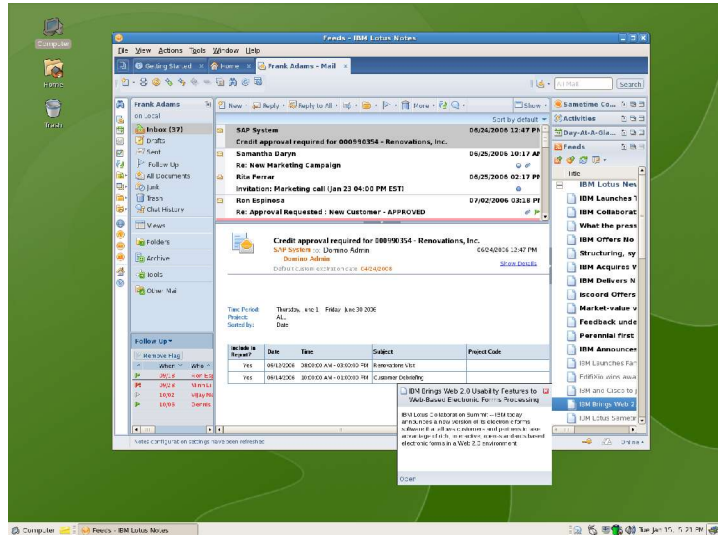
Now you can work and team in new ways. Because Lotus Symphony integrates with leading communication and collaboration tools, you don't have to jump between stand-alone applications. Plus, you can work in different environments - online or offline, in the office or remote - you choose how and



when you work.

Lotus Notes:

IBM Lotus Notes is more than an email client. It is a complete solution for enterprise business needs. In the latest release IBM has given the Notes client a new look based on customer requirements and feedback. Users can experience a complete collaboration solution within the single framework of the Notes client. It has builtin editors to help users make changes to the documents in a single frame and then share with other colleagues either by sending them back the document or by creating an activity on Lotus Connection Server with the help of an integrated activities plugin. In order to communicate with corporate employee, Lotus Notes comes with Enterprise ready Sametime client. Users can right click on colleagues name from ST windows or within a mail folder and start and instant conversation. Whole experience of Notes 8 is to make end user more productive in his day to day job.

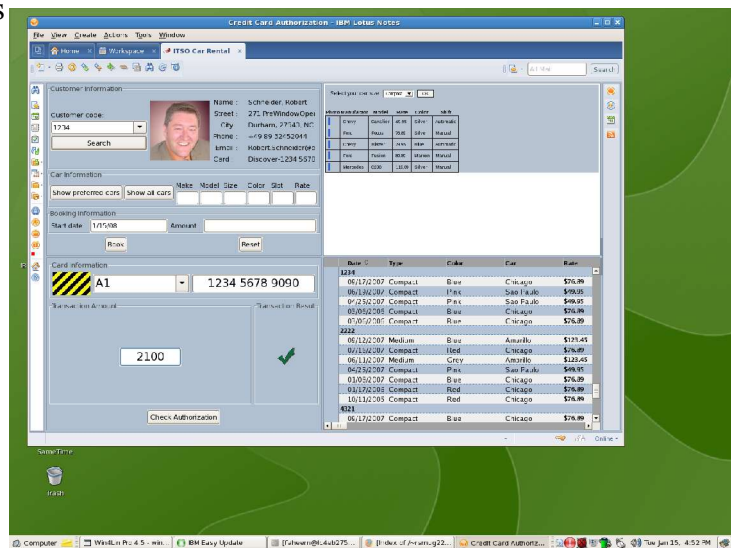


Lotus Sametime:

IBM offers Unified communication and collaboration through new Sametime client. Both Sametime Server and Client are supported on RedHat and SUSE Linux Enterprise Desktop. This provides customers with more flexibility who have chosen to go Linux route for there organization. Lotus Sametime Connect comes embedded with Notes 8 client or can be purchased and run separately as a standalone application.

Lotus Expeditor:

Open collaboration client solution components are based on Lotus Expeditor. This product is built on the open standard eclipse platform. Lotus Expeditor features like offline support for applications, local encrypted repositories, local EJB containers, etc make this product a backbone of Lotus client products. Lotus Notes 8, IBM Symphony and Lotus Sametime are all built on top of Lotus Expeditor. A number of IBM Business Partners have developed applications on top of Lotus Expeditor to serve our customers. Lotus Expeditor allows customers or business partners to extend the functionality of Lotus Expeditor based products to included customized applications and plugins.



Lotus Connection:

While customers are adopting Linux Desktops and IBM has answers to their enterprise needs for messaging and collaboration needs, Lotus Connection is a Web 2.0 ready social software product designed to enhance the way users collaborate in today's society. Lotus Connection is supported on Linux via plugins available for the Linux Desktop. It may be accessed via the Firefox web browser or from activities plugin integrated into Lotus Notes, available for Linux Desktop. Features offered by Lotus Connections includes: Profiles, Communities, Blogging, Dogear and Activities.

Lotus Quickr:

As people collaborate more online using social applications like Lotus Connection, they need a place holder for saving the content online to be shared among the community. Lotus Quickr application offers content repositories for users and can be accessed via Firefox on Linux Desktop. This product also offers team services which lets users organize, access, manage team projects online. Lotus Quickr server is also supported on Enterprise Linux servers.

Jumpstart Methods, Work products

We will talk in depth about User Segmentation models, but we also have to analyze types of applications, applications usage within user groups and applications which are ready to be sunset. You will have to go through inventory of the applications used in the environment and see what needs migration from .Net or VB to Java. We have couple of Business partners available such as DiamondEdge and Mainsoft to help customers migrate applications to Java. After that you will analyze browser based applications. You have to test them out on FireFox browser to make sure they are browser independent. These exercises will help you plan in deployment open collaboration client solution on Linux Desktops.

User Segmentation:

User segmentation is one of the most important elements to consider before rolling out a Linux Desktop solution. A typical enterprise office will have machines assigned jobs such as "Fixed Function", "Technical Workstation", "General Office" and "Advanced Office/Power User" machines.

End User Segmentation and User Profiling

Fixed Function	Technical Workstation	Transactional Workstation	General Office	Advanced Office (Power User)
Limited use of business applications		Applications which drive business processes		
Limited office productivity	Basic office productivity		Advanced office productivity	
No e-mail	Basic e-mail		Advanced e-mail	
No instant messaging	Instant messaging			
Simple browser access to Internet and portals			Advanced browser access to Internet	
File/Print, systems management, network access/host emulation				

Leverage IBM SWG cross platform software stack to expand into additional segments

Fixed Machines provide limited usage, such as applications being accessed via a web browser (Firefox, IE). Most of the work is done on the server side with very little dependence on a client machine. Such machines are usually operated by an administrative assistant and used as Kiosks or dumb terminals running on Thin Clients. Such systems require limited office functionality and may provide basic email

and browser features with limited access to advanced desktop features. Linux Desktops play very well in such environments because most tasks are performed on server side and the applications required to perform such tasks come standard with Linux Desktop such as Firefox, Samba File/Print, Open Office etc.

Technical, Transactional and General Workstations on the other hand have applications ranging from Email Clients to business critical applications running locally on the machines. The majority of the corporate population will fit in this category to service enterprise needs. These users will require basic office functionality, Email, Instant Messaging, company portals, browsers and access to file/print systems to do day to day jobs. Linux Desktops have gained a lot of ground to meet the needs of this user segment. Acknowledging customer costs and security concerns, IBM started investing in the Linux Desktop by extending support of its enterprise applications on the Linux Desktop. Lotus Notes 7.0.1 was the first IBM enterprise email client supported on the Linux Desktop. After that IBM added support for Sametime Instant Messaging Client, Lotus Expeditor, IBM productivity editors, IBM Mobility client and some Lotus Connection plugins. Today we have completed a number of customer pilots running IBM's client stack on Linux Desktops and have a good set of those customers as customer references.

Advance Office machines will have dependencies like advanced features from email, editors, and applications. They might have heavy graphical or computational requirements to do their jobs. These users might depend on products which are not supported on the Linux Desktop. Applications like IE, AutoCat, accounting software, etc. which are only supported on a Windows platform. These users are usually harder to convince to migrate to Linux Desktop because of their dependencies. In such user scenarios, there exist alternative solutions available to allow them to migrate to a Linux Desktop while still having access to native Windows applications. One option is VMware which allows you to run a Windows OS as a guest from your Linux desktop. Win4Lin is another option where Windows is installed in an emulator to serve the needs of Windows users. VMware and Win4Lin are both proprietary software and require additional licensing costs. Xen on another hand is open source software which lets you use run Windows in guest mode.

Architectural Decisions

Key decisions include (a) Solution stack mix based on user segmentation, (b) Interoperability models, (c) Integration, (d) Formats, (e) Drivers, (f) Virtualization, (g) Client type – thin/fat, (h) Web Browser, etc ... TBD

Windows-Linux Interoperability

There are any number of ways for Linux users to inter operate with Windows users:

Dual booting: Linux and Windows partitions can be installed on the same computer, allowing the user to choose at start-up time which OS they wish to boot in;

Network access: Linux users can readily access Windows network volumes using the SMB protocol. Lycoris, Lindows etc. for instance, have access to a GUI network device utility that is very similar to My Network Places under Windows, allowing them to easily access Windows volumes;

Virtual machines: Solutions like VMware and Xen allow Linux users to install Microsoft Operating Systems as a virtual machine, and run Windows applications within the Windows operating system.

With , complete with any Windows application, in a window on their Linux desktop;

Terminal servers: Products such as Citrix's Linux client or Ericom allow Linux users to remotely run Windows applications in a window on their Linux desktop.

Windows emulation: Win4Lin offers users to install and run Windows Operating system on Linux Desktop. Users can access local partitions and folders to read/write the data from Windows session. WINE and commercial software CrossOver Office/Plugin also allow users to run Windows applications as-is under Linux. This works great for Microsoft Office, Internet Explorer, Windows Media Player, and Adobe Photoshop.

File format compatibility/functional equivalents: As discussed above, applications such as Ximian Evolution and OpenOffice offer varying degrees of file format compatibility, cloned functionality or ability to integrate in a Windows environment.

Conclusion:

IBM has offerings in place to address Email, IM, social networking, secure VPN logins, J2EE business applications on enterprise Linux Desktop. More and more customers are rethinking windows strategy and asking if Linux Desktops can address needs of basic worker user segment. Customers have been for 6-8 years adopting Linux Servers to run routes, gateways, websites, web applications, but with all the security concerns and IT cost they are now getting serious about considering Linux Desktops as an alternative. We are working with customers to get the Linux Desktop strategy in place by offering complete enterprise ready solutions on Linux Desktop. Linux Desktop at this point is ready for prime time. IBM open collaboration client solution on Linux Desktop is surely an alternative solution for our customers.

Summary

This article guided you through the most important technical considerations you have to decide on, when you are going to introduce a Linux client in your organization and when you have to process technical planning for your pilot phase. It provides you a bundle of options for your technical planning and discussed advantages and disadvantages.

We hope, that his article offers a solid and pragmatic guideline to successfully perform the technical planning for your Linux client pilot. And furthermore that this pilot is the start of a productive, cost-effective and efficient usage of a Linux client in your organization.

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