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Blackberry Support Recommendations

Within the University of Guelph Computing and Communications Services (CCS) department, the Communications and Collaboration (C&C) Cluster is charged with providing effective and reliable services for synchronizing Gryph mail and calendars with institutionally owned Blackberry devices. The current solution, Blackberry Enterprise Server (BES) coupled with Zimbra Connector for Blackberry (ZCB), suffers from some systemic but largely manageable issues. Still, there are sufficient concerns to justify investigation and evaluation of other options. Astrasync, a third party application for the Blackberry, appeared promising and its utility was assessed.

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Executive Summary

Within the University of Guelph Computing and Communications Services (CCS) department, the Communications and Collaboration (C&C) Cluster is charged with providing effective and reliable services for synchronizing Gryph mail and calendars with institutionally owned Blackberry devices. The current solution, Blackberry Enterprise Server (BES) coupled with Zimbra Connector for Blackberry (ZCB), suffers from some systemic but largely manageable issues. Still, there are sufficient concerns to justify investigation and evaluation of other options. Astrasync, a third party application for the Blackberry, appeared promising and its utility was assessed.

A comparative review and evaluation of Astrasync and ZCB/BES was carried out. The features and limitations of each were documented and feedback from Astrasync test users was taken into account. In summary, Astrasync has its own idiosyncrasies and would require an unreasonable strain on support resources. Conversely, until BES/ZCB stabilizes, support requirements will remain high.

The resulting recommendations are as follows:
- Astrasync suffers from several functional deficits and is not sufficiently differentiated in overall quality to warrant endorsement as a supported solution.
- BES/ZCB administrative load with its current issues and cost both grow with an increasing user base. Extending the service to more than approximately 150 users is not currently recommended until pending enhancements are implemented.
- Privilege to use BES/ZCB should be available to those individuals/groups that have UG paid-for Blackberry devices.

Comparative Analysis

Astrasync

General Description and Notes
Astrasync is a third party Java application that enables Blackberry synchronization via Activesync. The software resides on the Blackberry device and does not require centralized installation or administration.

The product is licensed with an annual fee of 49USD/year. Potentially, the organization could negotiate volume discounts reducing this cost to 40USD/year although this would necessitate centralized administration costs that likely exceed the expected savings.

Features
In testing, Astrasync appeared to be a stable product that largely functioned as specified.

Restrictions
Decentralized administration would make tracking users at an organizational level very challenging.

As this product is distributed to end user devices, support is problematic and issues will be much more sensitive to device and/or configuration quirks. This observation is borne out through a review of the Astrasync support forum. There would be a greater expectation of end user self-sufficiency.

License compliance appears to be controlled via periodic pings to the company's web site. This introduces another opportunity for failure and, it should be noted, the product is actually leased and not purchased. The company is small and its survivability is far from guaranteed. If Astrasync folds, it is probable that all users will essentially be without service.

There is, at least for some users, a need for data protection on mobile devices. There is no way with Astrasync to remotely wipe data on a lost or stolen Blackberry. It should also be noted that there is no clear understanding of the existence or scope of an official policy on this matter.

Issues

During testing a number of issues arose. These are specifically functional limitations when compared to the 'expected' behavior as seen by BES/ZCB synchronization.

- Meetings requests cannot be accepted from the Blackberry.
- Meetings do not display attendees when viewed on the Blackberry
- Error messages are sometimes displayed for transient issues that may be confusing to users.
- Synchronization of changes made in Gryph Mail sometimes had a very high latency period before propagation.
- There were issues with calendar entries not appearing properly on the Blackberry
- The Astrasync service caused a noticeable drain on the device battery. Typical observations indicate a nearly 100% increase in discharge rate when compared to BES/ZCB synchronization.
- An outside organization (Simon Fraser University) reported the potential need for increased data allowances in wireless service agreements as Astrasync is a 'chatty' application.

Some of the functional limitations are targeted enhancements in the newest release of the software. This review did not test pre-release software.

BES

General Description and Notes

The Blackberry Exchange Server (BES) is a centralized service that synchronizes client Blackberry devices with a Microsoft Exchange server. There is no specific Zimbra equivalent or generic service. Zimbra went the route of emulating the Exchange API through an Outlook link to the BES server. This is a complex and somewhat error prone configuration. It is not clear whether the major issues commonly lie with the ZCB or BES component.

Licensing is centralized and based on both a server license and the number of users enrolled. Server license is approx. $3500 while the 'per user' cost is approx. $70. The annual fee for support and right to use new version is currently unknown but a best estimate is $1000/per server and $10/user. Additionally, users must share in the cost of the physical server. Current costs per user are high owing to initial and ongoing deployment challenges where the practical limit on users/server is 50.

Features

ZCB/BES is the established solution with experienced administrators on staff. It offers simple device setup and simple administration along with centralized management and

security. A key feature of ZCB/ BES is the ability to remotely wipe data from the Blackberry in the event of loss or theft.

Restrictions

BES/ZCB currently suffers from stability problems most commonly causing occasional failures in calendar synchronization and a requirement to reset the server. Resolution of these problems is not under our control; however, Zimbra has worked to reduce the issues and can be reasonably expected to deliver additional improvements in the future. Recent discussion with Zimbra indicates that, with the latest release of the software, they are recommending configurations supporting up to 250 users/server.

ZCB/BES also has a higher initial cost. In theory, the cost going forward can be reduced through the use of virtualization and the aforementioned stability improvements.

Issues

The greatest issue with the BES is the known instability of the server platform. While steps have been taken to improve issue detection and return to service timeframes, problem resolution largely lies with outside organizations (Zimbra, RIM and to a lesser degree Microsoft).

Discussion and Conclusions

Functionality

BES/ZCB provides dramatically better centralized administration and a better feature set for control of corporate information. This ability to protect information is completely lacking in the Astrasync product.

Reliability

Both ZCB/BES suffer from reliability issues. The distinction being that ZCB/BES issues are centralized and typically can be administered locally but at the risk of impacting other users. Astrasync issues are typically tied to individual users and will be more challenging to resolve. Testing did not indicate a significant difference in overall reliability.

Planned and Expected Enhancements

Astrasync is in the midst of releasing a software update that addresses some of the functional limitations of the software regarding calendar functionality but it is clear from a website and forum review that concerns regarding usability and reliability still exist.

The ZCB component of the current solution has been updated by Zimbra with reports of significantly improved reliability and scalability. If experience validates these improvements, current infrastructure will be sufficient for up to 750 users.

Projected Usage

Currently there are approximately 117 ZCB/BES users with licensed capacity for 200 users. Growth since mid-October has been 20 new users. The next effective limit is at 150 users when we reach the capacity currently recommended by Zimbra. No additional costs will be incurred until we reach 200 users.

Uptake was initially rapid with slower subsequent growth. Based on current growth rates, the 150 user limit will be reached around early March. Current licenses should then be sufficient for the remainder of this fiscal year. Optimistically, institutional growth will likely peak in the 300 user range with further growth dictated by a loosening of restrictions on

eligibility. Even with inclusion of student groups, it seems reasonable to expect an upper limit of 450 users which does not approach the theoretical limits of the existing infrastructure.

Cost Comparison

Astrasync software can be purchased independently of CCS involvement. It is not feasible to discourage use of this software if users wish to do so. At the same time, the limitations and known impacts make it difficult to endorse as 'the solution' in its current form.

The existing ZCB/BES deployment may not have been as large had the stability issues been fully known in advance. Still it is the incumbent product with a sunk cost that is non-recoverable. Going forward, additional ZCB/BES usage is more than price competitive with an incremental cost $70/user vs. $50/annum. Note also that the 3 year TCOs are very similar for a user base of 450 clients.

The following table outlines the cost of the solutions based on a number of scenarios: (Note that some numbers are approximated based on available information.)

Per user costs by scenario	# users	Initial Cost	Annual Cost	3 year Cost	3 year total cost
Bes Sunk Costs	N/A	$43,500	$600	N/A	$45,300
BES Cost/user	150	$0	$30	$60	$54,300
BES Cost/user	450	$39	$17	$72	$77,800
BES Cost/user	750	$51	$14	$79	$104,800
Astrasync	450	$50	$50	$150	$67,500

Recommendations

Support ZCB/BES Only

Astrasync suffers from several functional deficits and is not sufficiently differentiated in overall quality to warrant endorsement as a supported solution. Administrative staff will not be sufficient to manage two separate platforms.

Additionally, it is incrementally more economical to continue with ZCB/BES deployment than to switch applications.

Limit Short Term Growth

Expectations are that infrastructure software updates will shortly offer a significant boost in reliability and economics of ZCB/BES usage. Total subscriptions should be kept below 150 users until the updates, targeted for late this year and early next year, are completed and results validated. Based on expected subscription rates this should not be a major issue.

Restrict ZCB/BES Adoptions

ZCB/BES costs will decline as the product stabilizes. There is still a minimum theoretical 3 year TCO of approximately $140/user. Note that this limit does not consider potential savings through virtualization as the success of ZCB/BES on VMware has not been proven.

Privilege to use BES/ZCB should be available to those individuals/groups that have UG paid-for Blackberry devices. Exceptions should on only be considered through approval of CCS Management.