Online Backup Solution
Prepared for The Digital Ranch

Presented by Jacob Beebe and Zach Howlett
Project Goals

• Gain Real Word Experience
• Enhance Resume
• Provide a Service for a Local Company
• Network with Peers in Industry
• Graduate
Key Stakeholders

- The Digital Ranch
- The University of Utah MSIS Program
- Jacob and Zach
- The Digital Ranch's Customers
The Digital Ranch

- Been in business for over 16 years
- Named one of 10 Leading Providers in the Western United States by Forbes Magazine 3 years in a row
- One Stop Solution for
  - Web Development
  - Application and Smartphone development
  - Managed Hosting for servers, websites, email
The Digital Ranch

Making you look good with:

- Custom sites using Website Manager 4.0
- Content Management System
- Quick, easy updates to your site
- Unlimited pages
- SEO Keyword fields
- Match existing branding
- Integrates with Customer Connect
- New Features

Facebook:
- Custom landing pages
- Monthly report
- Daily posts
- Ad campaign

Twitter:
- Manage followers
- Daily tweets

LinkedIn:
- Profile creation
- Daily posts

Google +:
- Account creation
- Circle set-up
- Daily posts & updates
Project Phases

• Market Research
• Product Research
• Product Selection
• Installation/Testing
• Concluding Report and Presentation for the Digital Ranch
Causes of Data Loss

- Hardware malfunction: 44%
- Human error: 32%
- Software corruption: 14%
- Computer virus: 7%
- Natural disasters: 3%

Source: Ontrack survey in 2002
Data Loss Statistics

- "Data loss costs U.S. businesses more than $18 billion a year" - 2003 Pepperdine Study
- "About 70% of business people have experienced data loss due to accidental deletion, disk or system failure, viruses, fire or some other natural disaster." - 2006 Carbonite survey
- It’s not a matter of IF but WHEN a hard drive will fail.
• If data is permanently lost the average cost is $20,557.
• "A survey conducted in 2001 by Contingency Planning Research reports that the majority of companies estimate the average cost of computer network downtime to exceed $50,000 an hour, and for some companies that figure rises to over $1,000,000 per hour."
Figure 3 Online Backup Market Segmentation

- Online PC backup for PC at HQs and remote offices
- Online server backup of file servers and small application and database servers at remote offices
- Online PC backup
- Online server backup using hybrid approach (backup locally to disk, vault second copy to vendor)
- Online PC backup
- Online server backup

Global 2000 enterprises
>19,999 employees

Very large enterprises
5,000 to 19,999 employees

Large enterprises
2,500 to 4,999 employees

Large enterprises
1,000 to 2,499 employees

Small and medium-size businesses
<1,000 employees

Source: Forrester Research, Inc.
Figure 2 Adoption Of Backup-As-A-Service Is Still Slow Across SMBs And Enterprises

“How interested is your firm in adopting backup-as-a-service or online backup services for PCs in the next 12 months?”

- Not interested: 39%
- Interested but no plans: 40%
- Planning to implement in a year or more: 7%
- Planning to implement in the next 12 months: 4%
- Implemented, not expanding: 6%
- Expanding/upgrading implementation: 3%
- Don’t know: 0%

Base: 603 and 649 SMB and enterprise IT hardware decision-makers, respectively (percentages may not total 100 because of rounding)

Source: Forrsights Hardware Survey, Q3 2010

Source: Forrester Research, Inc.
• Only 7% of SMB either plan to implement online backup services or plan to expand their online backup solution. Wide open market to try and enter.
• 6% of SMB have an online backup solution but do not plan on expanding.
• Did some Google searching for local companies and before the end of the first page only out of state options. The Utah market is either small or not advertised well.
Product Research Plan

• Research industry leaders
• Weed out consumer products. We were looking for a MSP product
• Research forum and review websites
• Research competing products
• Narrow the field to 5 products for evaluation
Product Research

- Asigra
- NovaStor
- Vembu Storgrid
- Syncrify
- Ahsay
## Software Selection Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weight (example)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental Backups</td>
<td>(0.15)</td>
</tr>
<tr>
<td>Compatibility (cross platform/OS version)</td>
<td>(0.15)</td>
</tr>
<tr>
<td>Scalability</td>
<td>(0.10)</td>
</tr>
<tr>
<td>Ease of use</td>
<td>(0.15)</td>
</tr>
<tr>
<td>SSL security</td>
<td>(0.10)</td>
</tr>
<tr>
<td>Password protected</td>
<td>(0.05)</td>
</tr>
<tr>
<td>Encrypted Storage</td>
<td>(0.15)</td>
</tr>
<tr>
<td><strong>Whiteboxing</strong></td>
<td>(0.05)</td>
</tr>
<tr>
<td>Price</td>
<td>(0.10)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1.0</td>
</tr>
</tbody>
</table>
Asigra

- Industry leader for online backup solutions
- Complete feature set designed for enterprise level solutions
- Pricing model based on storage capacity
- The real advantages of Asigra are best seen in large installations involving numerous workstations, multiple servers and databases, higher security levels, agentless solution, and storage solutions around 100 TB or larger
NovaStor

- Software included every feature the Ranch required except Mac support
- US based company with exceptional support
- No additional costs for VMWare or HyperV
- $5,000 up front fee plus $3 a month fee for every license
Vembu Storgrid

- Included all the features required by the Ranch
- No additional charges for different types of backups (exchange, VMWare, Databases, etc)
- $2,000 up front cost with additional high annual licensing fees
Syncrify

- Has all the features the Ranch required
- Affordable upfront cost that includes 100 licenses and premium package features
- No annual licensing fees
- Limited technical support
Ahsay

- Affordable lease or purchase options which include optional annual fees
- Feature set covers desktop to enterprise level applications
- Additional fees are incurred for Exchange and VMWare
# Software Selection Criteria

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Weight</th>
<th>Ahsay</th>
<th>Novastor</th>
<th>Vembu</th>
<th>Syncrify</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incremental Backups</td>
<td>(0.15)</td>
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<td>.15</td>
<td>.15</td>
<td>.15</td>
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<td>Compatibility (cross platform/OS version)</td>
<td>(0.15)</td>
<td>.15</td>
<td>.08</td>
<td>.15</td>
<td>.15</td>
</tr>
<tr>
<td>Scalability</td>
<td>(0.10)</td>
<td>.10</td>
<td>.10</td>
<td>.07</td>
<td>.10</td>
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<tr>
<td>Ease of use</td>
<td>(0.15)</td>
<td>.12</td>
<td>.15</td>
<td>.12</td>
<td>.15</td>
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<tr>
<td>SSL security</td>
<td>(0.10)</td>
<td>.10</td>
<td>.10</td>
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<td>.10</td>
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<tr>
<td>Encrypted Storage</td>
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<td>0.15</td>
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<tr>
<td>Whiteboxing</td>
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<td>.05</td>
<td>.03</td>
<td>.05</td>
</tr>
<tr>
<td>Price</td>
<td>(0.10)</td>
<td>.10</td>
<td>.05</td>
<td>.03</td>
<td>.10</td>
</tr>
<tr>
<td>Total</td>
<td>1.0</td>
<td>.95</td>
<td>.88</td>
<td>.86</td>
<td>.98</td>
</tr>
</tbody>
</table>
Installation and Testing

- Create testing plan
- Verify plan and update with the Digital Ranch
- Setup Hardware/Install Software
- Run tests tracking results, performance, and errors
- Select a software that best fits the Ranch's needs
Testing Plan

- We broke down testing into two different categories: compatibility and functional
  
  **Compatibility** - types of files (pdf, doc, etc,) Types of Platforms (Windows XP, 7, Server 08, Mac,) Web Browser (IE, Firefox, Chrome, Safari,) Types of Services (MySQL, mail server)

  **Functionality** - Backup Scheduling, Types of Backups, Backup Limits, Management During Backup, Simulated Backup Interruption, Backup Completion, Offline Backup, Restore Testing, Security, Barebones Backup
• Documentation was stressed by the Ranch.
• Included in our documentation: installation guides, configurations used, errors, branding, administrators guides, performance
• Documentation process: take and label screenshots, document steps taken and changes made, and keep detailed notes
Testing Phase
Syncrify Test Server Hardware and Software

• The Test Server for Syncrify Specifications:
  – Windows Server 2008 R2 SP 1
  – 1 GB of RAM
  – AMD Athlon 64 X2 Dual Core Processor 2400+ 2.20 GHz
  – 64-bit OS
  – T1 connection
Syncrify Server Installation

- Syncrify server download can be found on Syncrify's website
- Syncrify client can be found on the Syncrify server's website
- Installed Syncrify client on Windows 7, Windows XP, and Mac OS X
Testing

- Compatibility Testing Web Browsers
Mac Compatibility

• Syncrify worked very well with Mac. We did not find any compatibility issues specific to the Mac client or the web portal. We tested Safari, Firefox, and Chrome.
Functional Testing

- Syncrify did not have any problems backing up a large number of small files.
- When backing up large files Syncrify did not always finish the backup process. When this occurred the client application would freeze. No error messages were produced from the freezes.
- We researched different websites and read forum posts but could not find a fix to the problem.
The backup scheduling worked perfectly.
Backup Type: Full or differential; Users can set up Daily, Weekly, Monthly
Backups can be scheduled for specific times or time internals (ex: hourly)
If the computer was not online during a scheduled backup the next time the computer came online the backup started immediately
The Digital Ranch - version: 3.0 - build 596

Files/Folders to backup
- Profile - Mac_Backup
  - /Users/zhowlett/Desktop
  - /Users/zhowlett/Documents
  - /Users/zhowlett/Music
  - /Users/zhowlett/Pictures

Backup options
- Current Profile Name: Mac_Backup
- Remote Server URL: http://206.71.69.168:5800
- Login Email: zach@zachhowlett.com
- Login Password: *********

Scheduler
- User ID: zhowlett
- Status: Schedule exists
- Schedule: 3:00 AM every day

Buttons:
- Save
- Backup
- Restore
- Modify
- Delete
Backup Limits

• On the server each client is given an allocated backup limit
• If a client plans a backup that exceeds the limit of the allocated space the backup will complete as scheduled
• The administrator will see that the account is in red
• On the next scheduled backup, an error message will pop up saying the client needs to contact the administrator for more space
## User Management

<table>
<thead>
<tr>
<th>Email</th>
<th>Repository Path</th>
<th>Disk used / Quota</th>
<th>Profiles</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td><a href="mailto:zach@zachhowlett.com">zach@zachhowlett.com</a></td>
<td>C:\Users\Administrator\Documents\Syncrify Backup</td>
<td>8.94 GB / 8 GB</td>
<td>3 (View)</td>
<td>Modify</td>
</tr>
</tbody>
</table>
Management During Backup

- Syncrify has limited to no management functionality during the backup process.
- The only administrative function is to restart or turn off the Syncrify service.
Main Admin Console

Memory Status

<table>
<thead>
<tr>
<th>Used Memory</th>
<th>8 MB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allocated Memory</td>
<td>11 MB</td>
</tr>
<tr>
<td>Total Memory</td>
<td>130 MB</td>
</tr>
</tbody>
</table>

Current Activity

Server running since: 3/18/12 11:35 AM
Total sessions: 1
Active sessions: 0

Active Users

No active backup sessions are in progress.

Disk Status for C: \ Users \ Administrator \ Documents \ Syncrify Backup

| Total Disk Space | 237.39 GB |
| Total Used | 26.7 GB |
| Free Space | 271.29 GB |
Simulated Backup Interruption

• For Interruption we tested the following:
  – Turned off internet connection
  – Restarted Computer
  – Interrupted backup by moving computer to a different network

In all instances the backup continued and completed successfully.
Backup Error Notification

- We set Syncrify to alert via email both the client and the administrator when an error occurs, however no alert message was never received.
- Researched a fix for the issue but none was found.
Backup Error Notification
We removed the folder that the backup consisted of to a different location on the machine before the restore attempt. The restore completed successfully.
Security

- Before data is sent across the network it is encrypted using AES 128 encryption
- Administrator account cannot access encrypted data
- We tried capturing network traffic using Wireshark to see if it could be read. All the traffic was unreadable
• Branding is included with the ISP Edition. However, after branding the client, the branding was insufficient for what the Ranch wants.

• The web portal branding did not work. Images were not properly placed on the web portal.
Performance: Full Backup Times

- We backed up 3 types of data sets
  - small <1 GB. These backups usually took between 0-2 hours
  - medium 1-5 GB. These backups usually took between 5-12 hours
  - large >5 GB. These backups usually took anywhere from 14-28 hours
Performance: Incremental Backup Times

- Small <1 GB. Backups took between 15-30 minutes
- Medium 1-5 GB. Backups usually took between 1-4 hours
- Large >5 GB. Backups usually took between 5-8 hours
Ahsay Testing
• The Test Server for Ahsay Specifications:
  – Windows Server 2008 R2 SP 1
  – 5 GB of RAM
  – Intel Pentium 4 Processor 3.00 GHz
  – 64-bit OS
  – T1 connection (1Mb/s restriction)
Ahsay basic setup
Ahsay Server Installation

• Once licenses are purchased, partners use a customization portal to design and build OBS
• The OBS application is then downloaded and installed on the server
• Customized clients (ACB and OBM) are then downloaded and installed from the OBS server
• Clients were installed and tested on Windows 7, Windows XP, Server 2008, Server 2003, Ubuntu and Mac OS X
Website and Installation Wizards
OS Selection and Download

Installation Guide - AhsayOBM / AhsayACB - Windows

System Requirement
Please refer to the Ahsay Help Centre Article #3322 for the system requirements of AhsayOBM & AhsayACB v6.

Download
Download Ahsay Online Backup Manager - A full-featured backup software. (Please refer to the Ahsay Help Centre Article #3322 for the supported applications and servers).
Download Ahsay A-Click Backup

Get Started
1. Download the setup file above and run it.
2. Follow the instructions on the installation wizard to complete the installation.
3. When finished, a new icon (AhsayOBM / AhsayACB) will be installed to the system tray (near the clock) automatically and AhsayOBM / AhsayACB will be launched automatically.
4. Enter the backup server hostname in the [Address] field and press the [Next] button.
5. (Optional) If you are using a proxy server to access the internet, please fill in the [Proxy setting] section and press the [Next] button.
6. (Optional) If you do not have a backup account, you can register a trial user account by the following steps:
   i. Enter the [Login Name], [Password] and [Confirm Password] of your choice.
   ii. Enter your [Email] in the textbox provided.
   iii. Press the [Submit] button.
   iv. You should be logged to the backup server already. (If the [Login Name] of your choice is already taken by another user, try again with a different login name.)
7. If you have a backup account already, select [already a user?] and logon to the server with your existing username and password.
8. If this is your first time logging onto the server, you will be guided to create a backup set.

Date
The Ahsay Mac client is unusable. The download and installation worked fine. We were able to setup and start a backup process.
Once a backup was started, the application would say the backup completed with errors. We were never able to complete a full backup with the client.
We read forums posts on multiple different sites and tried multiple different fixes and nothing worked. Others had the same problems.
Mac Compatibility

Backup Progress

Backup completed with error(s)

Upload: 100%
Generate Delta: 0%
Estimated Time Left: 0 sec
Uploaded: 0 (0 file)
Elapsed Time: 7 sec
Transfer Rate: 0 bit/s
File Type Testing

- File Types tested: docx, doc, pdf, vsd, txt, ppt, xlsx, xls, jpg, png, avi, mp3, html, sql, mkv, and windows backup files
- All file types were backed up and restored without issue
- Ahsay can restore single files or all files from a previous backup
- File type affects performance (compression)
Browser Compatibility

• The web portal was tested on Internet Explorer, Mozilla Firefox, Chrome, and Safari
Database Testing

- MySQL Database testing: We created a database with over 3500 entries
- For testing we:
  - Dropped tables
  - Edited and deleted entries
  - Restored the Database
Installation and DB Creation
Successful Restoration
Backup Scheduling

• The backup scheduling worked perfectly
• Backup Type: Full, Differential, Incremental, or combinations of all 3 backups allowed
• Users can set up Daily, Weekly, Monthly or Custom schedules such as once per year
• Backups can be scheduled for specific times or time internals (ex: hourly)
• Continuous Data Protection and Offline Backup options are available
Types of Backups

- Backup sets consisting of hundreds of small text and image files
- Backups consisting of large .iso and system images
- Backups consisting of mixed file types and sizes
Bare Metal Backups

- Bare metal Backups: Backed up and restored Microsoft Server 2008 R2 Enterprise Edition with a web server and database services
  - Cold site hardware compatibility
  - Changes between 2003-2008
Backup limits

- Storage limits and available features are set by administrator when accounts are created.
- Optional trial accounts can be enabled with set storage limits as well.
- Storage space can be scaled up or down.
- Email notification when approaching quota size.
Exceeding Backup Limits
Admin controls of Backups

- Administrator can run or cancel any backup
- Full admin controls are available such as suspend, adjust quota size, change backup schedule, change backup set etc.

<table>
<thead>
<tr>
<th>No.</th>
<th>Login Name (Alias) -&gt; Backup Set</th>
<th>Backup is pending</th>
<th>Backup Type</th>
<th>Used / Quota (%)</th>
<th>Last Backup</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Barebone (Barebone)</td>
<td></td>
<td></td>
<td>9.04G / 50G (18%)</td>
<td>2012/03/15 09:29PM</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>Barebone2</td>
<td>Yes</td>
<td></td>
<td></td>
<td>2012/04/07 09:06PM</td>
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<tr>
<td></td>
<td>BareboneBackup</td>
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<td></td>
<td></td>
<td>2012/03/15 11:32PM</td>
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</tr>
<tr>
<td></td>
<td>Cricket</td>
<td>No</td>
<td></td>
<td></td>
<td>2012/04/05 09:00PM</td>
<td></td>
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<tr>
<td></td>
<td>MySQLBackup</td>
<td>No</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Ubuntu (Ubuntu)</td>
<td></td>
<td></td>
<td>0 / 2G (0%)</td>
<td>2012/03/15 10:50PM</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td>Ubuntu2 (Ubuntu2)</td>
<td>No</td>
<td></td>
<td>1.66M / 100M (1%)</td>
<td>2012/03/15 10:50PM</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td>BackupSet</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Backup Interruptions

• For Interruption We Tested the Following
  – Client Computer Offline: Missed Backup Reminder
  – Client Computer Crash: Backup not finished error
  – Network connection: Wait and continue
  – Backup server crash: Wait and continue
  – Backup server offline: Missed Backup Reminder
Seed Load Utility

- Backups and restorations can be done on external media and shipped
- Saves time, bandwidth, and system resources
- Local copy can also be saved and kept on site
Restorations

• All restorations completed successfully
• Restored 1000’s of files to original and other locations
• Restored from the backup server, local copies and manually transferred seed copies
• Restored files were checked for completeness
Restoration Error

One file that showed a restoration error

A .ppt file that had a file size difference between expected and disk size
Restoration Error
Restoration Error

[Image of two windows showing file properties with highlighted text: "8.18 MB (8,583,680 bytes)"]
Security

- Connection: 128-bit SSL Channel support
- Default: 256 bit AES encryption in ECB mode with user password as the encryption key
- Options: 128 or 1256 bit key lengths; ECB or CBC encryption modes; a custom encryption key; and the choice between Twofish, Triple DES or AES algorithms.
- Password recovery
Performance

5.84 GB in 18hr 13 sec
750.70kbit/s
2nd Network and Hardware Installation added.
  – Intel Core i5 760 (2.8GHz Quad)
  – 8 GB Ram
  – Windows 7 Professional SP1 64-bit OS
  – Xfinity 12 Mb/s connection

Speeds of 17 Mb/s over wireless G connection

Speeds around 3 Mb/s across valley over Xfinity high speed connections
Performance

- Incremental
- Compression
- Seed load (>40 Mb/s)
- Local copy
- Bandwidth (Vary schedules, throttle users)
Management

- Dashboard: User and Storage snapshots
- Email reporting: backup, restoration, usage and error reports to users or administrators
- Error logs: detailed logs for review and troubleshooting
- Web Access: manage from anywhere
## Management

<table>
<thead>
<tr>
<th>User Report</th>
<th>Time to run</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backup Report</td>
<td>Enable/Disable At the start of every hour</td>
</tr>
<tr>
<td>Online Restore Report</td>
<td>Enable/Disable At the start of every hour</td>
</tr>
<tr>
<td>Setting Change Report</td>
<td>Enable/Disable At the start of every hour</td>
</tr>
<tr>
<td>Missed Backup Report</td>
<td>Enable/Disable At the start of every hour</td>
</tr>
<tr>
<td>Inactive User Report</td>
<td>Enable/Disable Daily at 09:20 (HH:MM)</td>
</tr>
<tr>
<td>Off-line Backup Reminder</td>
<td>Enable/Disable Daily at 09:25 (HH:MM)</td>
</tr>
<tr>
<td>Backup Quota Reminder</td>
<td>Enable/Disable Daily at 09:05 (HH:MM) when [Storage/Quota] &gt; 90%</td>
</tr>
<tr>
<td>Trial User Reminder</td>
<td>Enable/Disable Daily at 09:50 (HH:MM)</td>
</tr>
<tr>
<td></td>
<td>Remind user 25 days after registration</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>System Report</th>
<th>Time to run</th>
</tr>
</thead>
<tbody>
<tr>
<td>Usage Report</td>
<td>Enable/Disable Daily at 09:55 (HH:MM)</td>
</tr>
<tr>
<td>Error Report</td>
<td>Enable/Disable Daily at 09:15 (HH:MM)</td>
</tr>
<tr>
<td>Replication Error Report</td>
<td>Enable/Disable Daily at 00:00 (HH:MM)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>System Job</th>
<th>Time to run</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inactive User Removal</td>
<td>Enable/Disable Daily at 09:35 (HH:MM)</td>
</tr>
<tr>
<td>Retention Policy Job</td>
<td>Enable/Disable Daily at 09:40 (HH:MM)</td>
</tr>
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</table>

## Administrator

<table>
<thead>
<tr>
<th>No.</th>
<th>User Add-on Modules</th>
<th>Login Name (Alias)</th>
<th>Registration Date</th>
<th>Trial Expiry Date</th>
<th>Used / Quota (%)</th>
<th>Owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><img src="image" alt="My SQL" /></td>
<td>Barebone (Barebone)</td>
<td>2012-03-13 (26 days ago)</td>
<td>Never Expire</td>
<td>9.04G / 50G (18%)</td>
<td>--</td>
</tr>
<tr>
<td>2</td>
<td><img src="image" alt="My SQL" /></td>
<td>Ubuntu (Ubuntu)</td>
<td>2012-03-10 (29 days ago)</td>
<td>Never Expire</td>
<td>0 / 2G (0%)</td>
<td>--</td>
</tr>
<tr>
<td>3</td>
<td><img src="image" alt="My SQL" /></td>
<td>Ubuntu2 (Ubuntu2)</td>
<td>2012-03-10 (29 days ago)</td>
<td>Trial will expire tomorrow</td>
<td>1.66M / 100M (1%)</td>
<td>--</td>
</tr>
</tbody>
</table>
Customization/Branding

Building custom installers for the following Ahsay products:
- iv. AhsayOBS and AhsayRPS
- v. AhsayACB and AhsayOBM

• Set the vendor name, support email and URL to your own values
• Put your own company logo and other images into the software.
• Set the default backup server hostname, TCP port number and protocol (HTTP/HTTPS) to your own values
• Hide/Show encrypting key checkbox in AhsayACB/AhsayOBM.
• Customize the terms of use statements shown in the installer of AhsayACB/AhsayOBM
Syncrify Pricing

- Only charge is cost of licenses
- Two Types - Professional and ISP:
  - Professional costs $50 per license
  - ISP is $1,500 comes with 100 licenses and full support
Ahsay Pricing Options

- Ahsay only charges for client accounts on the backup server
- Licenses can be purchased or leased

<table>
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<tr>
<th>Number of Licenses purchased</th>
<th>AhsayOBM price per license</th>
<th>AhsayACB price per license</th>
<th>Brick level Mailbox prices</th>
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Syncrify Takeaways

- Basic file backup service. Does not have the functionality to backup specific services like exchange or a database. Treats all files the same
- Very limited administration features
- Has issues backing up large files
- Limited branding capability
- Would not feel comfortable offering it to clients
Ahsay Takeaways

- Full featured and flexible backup service
- High level Security protecting users and The Ranch
- Impressive administration features
- Full branding capability
- Low start up costs and scalable with growth
- Poor Mac OSX support
Hang-ups

- The Ranch suggested skipping the exchange server testing. We didn't want to interfere with their production server and the amount of setup and configuration for a test was deemed too much.
- We didn't have a sample database on hand to use for testing, so we had to find one and do some syntax fixes to make it work with MySQL.
- Branding is not available in Ahsay unless you purchase a license.
- Limited because of T1 connection and slow speeds. We created a network at home to backup at a faster rate.
After we finished our testing we presented our findings to the Ranch along with our recommendations.

For the presentation with the Ranch we created a report for both Syncrify and Ahsay. We presented the Ranch with each report.
Key Takeaways

- COMMUNICATION IS KEY!!!
- Project was real world experience
- Used skills learned in the program to help guide the project
THE END