What's New with MunkiReport

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John: Desktop Engineer and Mac Admin

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github.com/tuxudo
Table of Bananas

• Review of MunkiReport
• What's new with MunkiReport
• Upgrade from version 2
• Troubleshooting
• Modules
• Making changes
What is MunkiReport?
<table>
<thead>
<tr>
<th>Hardware Model Breakdown</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>MacBook Pro (13-inch, Mid 2012)</td>
<td>2</td>
</tr>
<tr>
<td>VMware virtual machine</td>
<td>2</td>
</tr>
<tr>
<td>MacBook Pro (13-inch, Early 2011)</td>
<td>2</td>
</tr>
<tr>
<td>iMac (20-inch, Early 2008)</td>
<td>2</td>
</tr>
<tr>
<td>Mac Pro (Mid 2010)</td>
<td>2</td>
</tr>
<tr>
<td>Name</td>
<td>Serial Number</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>iMac 14</td>
<td>G8154XXXXXX</td>
</tr>
<tr>
<td>MacBook 7</td>
<td>YM9214XXXXXX</td>
</tr>
<tr>
<td>Mac Mini 25</td>
<td>YM0168XXXXXX</td>
</tr>
<tr>
<td>Mac Mini 13</td>
<td>YM9510XXXXXX</td>
</tr>
<tr>
<td>iMac 8</td>
<td>YM9510XXXXXX</td>
</tr>
<tr>
<td>iMac 20</td>
<td>YM9372XXXXXX</td>
</tr>
<tr>
<td>Xserve 2</td>
<td>YM0168XXXXXX</td>
</tr>
<tr>
<td>MacBook Pro 4</td>
<td>YM9214XXXXXX</td>
</tr>
<tr>
<td>iMac 17</td>
<td>YM9510XXXXXX</td>
</tr>
<tr>
<td>MacBook 9</td>
<td>YM9510XXXXXX</td>
</tr>
<tr>
<td>Mac Mini 2</td>
<td>YM9510XXXXXX</td>
</tr>
<tr>
<td>Mac Pro 5</td>
<td>C07DK1WXXXXX</td>
</tr>
</tbody>
</table>
Open Source

• Created and maintained by Arjen van Bochoven
• Over 3,370 commits
• 46+ Contributors
• More than 95,000 lines of code
• ❤️ feature and pull requests
Community Interaction

- Visit #munkireport channel on MacAdmins Slack - macadmins.org
- Post to munkireport Google Group
- GitHub issues - for bug reports and feature requests
- Send @bochooven homemade jams and beers
What Can I Do?

• Think of new enhancements and post them to GitHub
• Make your own modules and suggest changes
• Submit pull requests
• Test out new pull requests and modules
• Run beta releases in a dev instance
• Help others in #munkireport on MacAdmins Slack
"I think MunkiReport is the reporting tool that other reporting tools should be compared against! There are many tools on the market, especially on the Windows side, but very few are as good as MunkiReport."

— Miikkali Leppihalme's (@miikkali) boss
University of the Arts Helsinki
How is MunkiReport Different?

• Free, open source
• Bit more initial setup and maintenance
• Highly expandable
• Only supports reporting on macOS clients
• Can run with basic web server, PHP, database setup
What's new?
Core Changes

- Requires PHP 7
- Manually trigger migrations
- Composer staging
- Served out of munkireport-php/public
- Illuminate database connector
- New MySQL database configuration
Upgrade from v2
Upgrading from Version 2.x.x

• Backup your database and installation
• Update to at least MunkiReport 2.12
  - Have clients check in
  - View some listings
Upgrade to PHP 7

$ sudo apt-get install php7.1
Download and Setup MunkiReport 3
Migrate the Database

42 Database Update(s) Pending

Update

Upgrade Log
Create Client Package

• Curl install script into bash
• Setup AutoPKG(r) to make client package

$ sudo bash -c "$(curl http://example.com/index.php/?/install)" bash -i ~/Desktop
Recommended Server

- PHP 7.1
  - With pdo-mysql and libxml
- MySQL 5.7.7+
Troubleshooting
Check PHP Version $\geq 7$

### Munkireport System Status

#### PHP

<table>
<thead>
<tr>
<th>Version</th>
<th>7.1.7</th>
</tr>
</thead>
<tbody>
<tr>
<td>DOM Extension</td>
<td>enabled</td>
</tr>
<tr>
<td>SOAP Extension</td>
<td>enabled</td>
</tr>
<tr>
<td>Remote URL access</td>
<td>On (On)</td>
</tr>
<tr>
<td>PDO Extension</td>
<td>enabled</td>
</tr>
<tr>
<td>PDO Database drivers</td>
<td>mysql, psql, sqlite</td>
</tr>
</tbody>
</table>
Database Migration Errors

3 Database Update(s) Pending

Update

Expand

Upgrade Log

Migrating: 2017_02_09_231419_bluetooth

Error Migrating: 2017_02_09_231419_bluetooth

There is no column with name 'device_type' on table 'bluetooth'
Database Migration Errors

• Not upgrading from MunkiReport ≥ 2.12
• Database configuration not updated for v3
• Table's collation is not "utf8mb4_unicode_ci"
• Drop stuck table
• Ask in #munkireport on MacAdmins
Fatal error: Uncaught Error: Class 'Adldap\Adldap'
Setup Composer

• Download from getcomposer.org into munkireport-php
• cd into munkireport-php

$ php .\composer.phar update
$ php .\composer.phar install --no-dev --no-suggest --optimize-autoloader
Install adldap2

• Verify that php7.x-ldap is installed
• Download and setup with composer

$ php .\composer.phar require adldap2/adldap2
$ php .\composer.phar install --no-dev --no-suggest --optimize-autoloader
404 Page Not Found

The requested URL /munkireport-php/ was not found on this server.
Web Root Changed

- Symlink from munkireport-php/public to web root
- Change web root directory
- Update clients to use munkireport-php/public
Modules
New Modules

• Munki Facts (Munki Conditions)
• Usage Stats
• Applications
• DetectX
• Dev Tools
• FileVault Escrow
• Caching
• Sophos
• Supported OS
Munki Facts

• Collects results of Munki Conditions
• Allows admins to collect their own datapoint
• Similar to Jamf's Extended Attributes
• Contains
  - Listing
  - Report
  - Client tab
  - Widget
Usage Stats

• Shows network, disk, and CPU activity
• Requires 10.10 or higher
• Snapshot of system activity
• Contains
  - Listing
  - Client tab
Applications

• In depth information about Apps
• Code signing
• 32/64-bit
• Where it came from
• When it was last modified
• Contains
  - Listing
  - Client tab
  - Widget
DetectX

- Pulls data from DetectX Swift
- Requires Pro or Management license
- Admins must make their own Launch Daemon
  - Sample one included
- Contains
  - Listing
  - Client tab
  - Widget
Dev Tools

- Reports on development environment on client
- Xcode, SDKs, and command line tools
- Contains
  - Listing
  - Client tab
FileVault Escrow

• Rewritten to be a Crypt 2 destination
• Stores FileVault keys with encryption in database
• Contains
  - Client tab
Caching

• Rewritten to support High Sierra's caching
• Maintains compatibility with older caching server
• Reports on clients' reachable caching servers
• Contains
  - Client tab
  - Listings
  - Widgets
  - Report
Sophos

• Provides information about Sophos Antivirus
• Supports Sophos Central and Business
• Contains
  - Client tab
  - Listing
  - Widgets
Supported OS

• Lists highest supported OS for Mac
• Contains
  - Listing
  - Widget
Version 3 Module Changes

• Migrations redesigned and now required
• Model no longer defines and creates table
• Namespace changes to model
```php
<?php

class Bluetooth_model extends Model
{

use CFPropertyList\CFPropertyList;

class Bluetooth_model extends \Model
{
```
Migration Types

• Version 2 migrations
• Version 3 table updates
• New module
<?php
use Illuminate\Database\Schema\Blueprint;
use Illuminate\Database\Migrations\Migration;
use Illuminate\Database\Capsule\Manager as Capsule;

class MunkiFacts extends Migration
{
    public function up()
    {
        $capsule = new Capsule();
        $capsule::schema()->create('munki_facts', function (Blueprint $table) {
            $table->increments('id');
            $table->string('serial_number');
            $table->string('fact_key');
            $table->text('fact_value');

            $table->index('serial_number');
            $table->index('fact_key');
        });
    }

    public function down()
    {
        $capsule = new Capsule();
        $capsule::schema()->dropIfExists('munki_facts');
    }
}
Making Changes
Making Changes
Essential

Changing Stuff and Seeing What Happens

O RLY?

@ThePracticalDev
Custom CSS and JavaScript

- $conf['custom_css'] = '/custom.css';
- $conf['custom_js'] = '/custom.js';
<table>
<thead>
<tr>
<th><strong>Name</strong></th>
<th>Tuxudo's PowerBook G4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Last Inventory Update</strong></td>
<td>Wed, Jun 13, 2018 7:17 AM - 12 days ago</td>
</tr>
<tr>
<td><strong>Last Check-in</strong></td>
<td>Wed, Jun 13, 2018 11:32 AM - 12 days ago</td>
</tr>
<tr>
<td><strong>Initial Enrollment</strong></td>
<td>Wed, May 16, 2018 6:19 AM - a month ago</td>
</tr>
<tr>
<td><strong>IP Address</strong></td>
<td>17.25.4.127</td>
</tr>
<tr>
<td><strong>Reported IP Address</strong></td>
<td>17.25.4.127</td>
</tr>
<tr>
<td><strong>Jamf Binary Version</strong></td>
<td>10.4.0-t1524514850</td>
</tr>
<tr>
<td><strong>Managed</strong></td>
<td>Yes, by administrator</td>
</tr>
<tr>
<td><strong>Last iCloud Backup</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Last Enrollment</strong></td>
<td>Wed, Jun 13, 2018 7:05 AM - 12 days ago</td>
</tr>
<tr>
<td><strong>MDM Capable</strong></td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Enrolled via DEP</strong></td>
<td>No</td>
</tr>
<tr>
<td><strong>User Approved MDM</strong></td>
<td>Yes</td>
</tr>
</tbody>
</table>
Jamf Widgets

- Enrolled via DEP
- User Approved Enrollment
- User Approved MDM
- MDM Capable
- Purchased or Leased
- Automatic Login Disabled
- XProtect Version
- Jamf Binary Version
- Pending and Failed Commands
- Departments
- Buildings
- Last Client Check In
<table>
<thead>
<tr>
<th>Setting</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lookups Enabled</td>
<td>Yes</td>
</tr>
<tr>
<td>JSS Server</td>
<td><a href="https://jamf.apple.net/">https://jamf.apple.net/</a></td>
</tr>
<tr>
<td>Verify Jamf SSL Certificate</td>
<td>Yes</td>
</tr>
<tr>
<td>Jamf API Username</td>
<td>JSSAPIUser</td>
</tr>
<tr>
<td>Jamf API User Password Set</td>
<td>Yes</td>
</tr>
<tr>
<td>Institution</td>
<td>Apple Inc.</td>
</tr>
<tr>
<td>License Type</td>
<td>Enterprise</td>
</tr>
<tr>
<td>Product</td>
<td>Casper Suite</td>
</tr>
<tr>
<td>Version</td>
<td>10.4.3-t1625534531</td>
</tr>
<tr>
<td>Jamf API User Privileges</td>
<td>Read Accounts, Read Computer Check-In, Read Computer Extension Attributes, Read Computer Inventory Collection, Read Computers, Read Configurations, Read Mac Applications, Read macOS Configuration Profiles</td>
</tr>
</tbody>
</table>
Banana Review

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Questions?