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# Application Packaging: From out of Control to Under Control



**ITNINJA**

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# Today's Speakers



**Bob Kelly**

Founder of  
AppDeploy &  
ITNinja



**Lisa Richardson**

Sr. Product Marketing  
Manager at  
Dell KACE

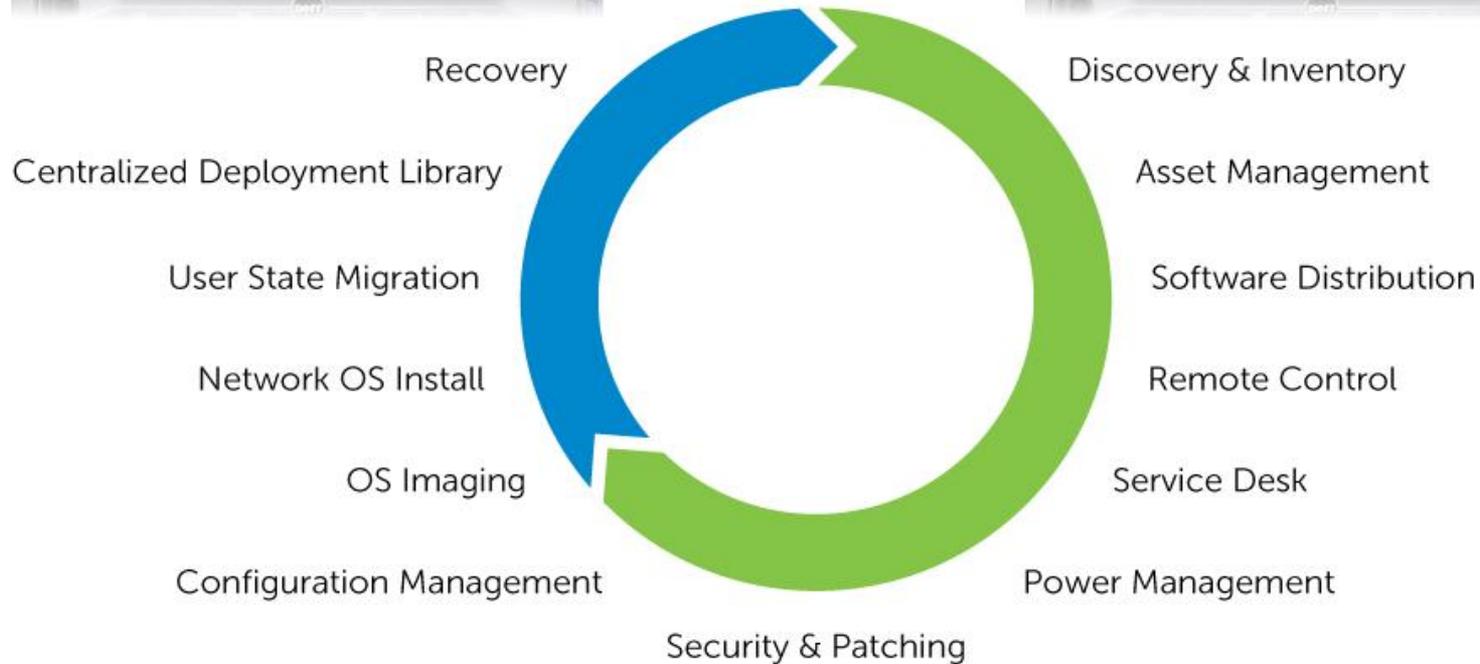
# Dell KACE K Series Appliances

## Computer Lifecycle Management

**KACE K2000  
Deployment Appliance**



**KACE K1000  
Management Appliance**



Available as Physical or Virtual Appliances



\*K1000 Only

# Dell KACE: The Appliance Difference

## Rapid Deployment

Plug & Play Setup

Secure & Hardened

No HW or SW Prerequisites or Professional Services Required

## Automated Maintenance

One Click Upgrades

Nightly Backups & Maintenance

## Easy to Administer

100% Web-based UI

Manage from any web-browser (Win, Mac, Tablet, Handheld)

Designed for ease-of-use

## Reduced Cost

Web based training

No additional professional services required



Bob Kelly  
Founder of  
AppDeploy &  
ITNinja



# Agenda

A Timeline Approach to Application Packaging

AppDeploy Migration to ITNinja

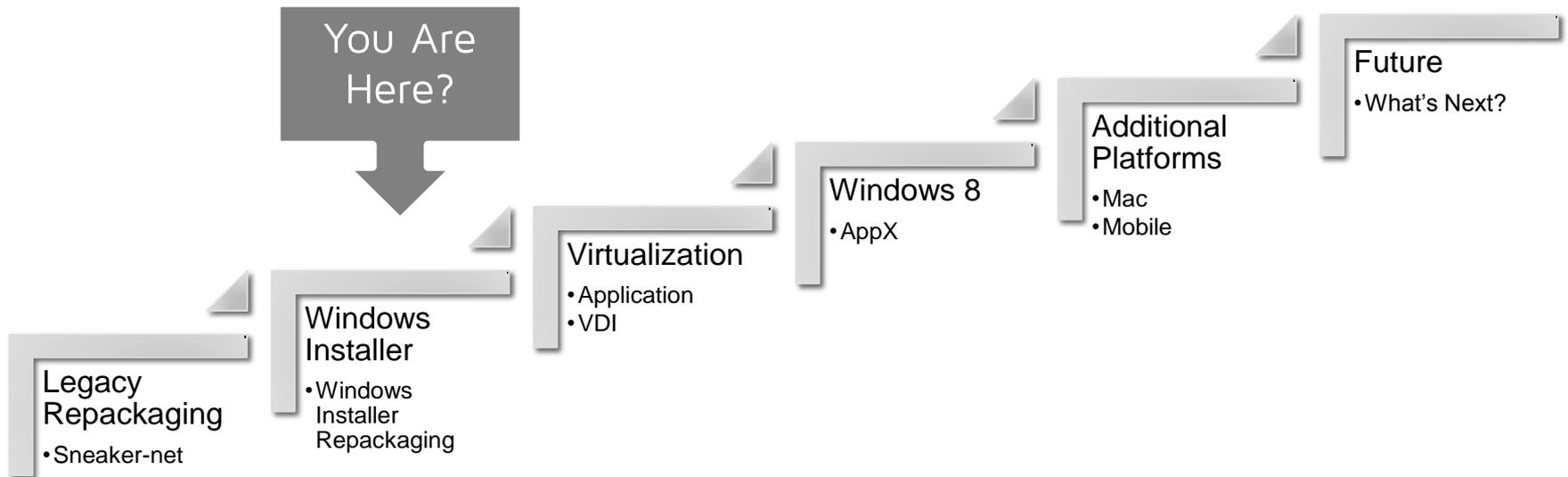
Packaging Tips and Tricks

Repackaging Demo

Windows 8 and Future Technologies

Q & A

# Packaging Timeline



# Sneaker-Net

- Manageable with large staff focused on smaller numbers of systems
- While increasingly less common, many organizations still have a handful of applications that get installed manually today



# Every Application is its Own Puzzle

*and the reason AppDeploy was established*

## • Windows Installer (MSI)

- /i
    - Install the specified MSI
  - /x = remove
    - Remove the specified MSI
  - ROOTDRIVE=C:\ul>  - Install to the C drive, not just the drive with the most free space
- /qn
  - Install silently with no user interface
- /!\*v
  - Create a verbose at the path and filename specified
- REBOOT=ReallySuppress
  - Do not allow the machine to be rebooted following installation

## • InstallShield Legacy Setup

- /r /f1 "path to ISS file"
  - Execute the installation while recording any wizard responses in an ISS answer file at the specified name and path
- /s /f1 "path to ISS file"
  - Run a silent installation using the specified ISS answer file
- /sms
  - Do not release the current session until the installation is complete



## • InstallShield Windows Installer Setup

- /s /v/qn"windows installer parameters"
  - Silently install and pass the specified parameters to the included Windows Installer setup

## • Wise Installation System

- /s
  - Silent installation, no further options available by default

## • Inno Setup

- /sp- /silent /norestart
  - Install silently with no prompts and no restart

## • Nullsoft Scriptable Install System (NSIS)

- /s /D="installation path"
  - Install silently in the specified location

# AppDeploy: April 2000



Intelligent Software Distribution  
**cognet**

[Advertise Here](#)

## AppDeploy.com

the application deployment information center

- Message Boards
- Tools
- Scripts
- Package Info
- Articles
- Books
- Chat
- Search

Your deployment Method?

SMS 1.2

SMS 2.0

Tivoli

Cognet

RapidDeploy

Custom Script

Other

[Other Surveys](#)

### What's New

- [Tools area](#) updated. Now **71** different tools detailed. 5 most recent additions:
  - [Upgrade Suite](#)
  - [Real-Time Replicator](#)
  - [Installation Packager](#)
  - [PrimalSCRIPT](#)
  - [ThinPath](#)
- [Articles area](#):
  - [Custom Deployment Scripts](#)
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- [Cognet](#) - Application distribution the smart way, deploy only the files required by each workstation and configure bandwidth.
- [EPiCON](#) - EPiCON's ALTIS provides enterprises and Application Service Providers the ability to centrally manage the desktop side of applications, (deployment, installation, updates, self-healing and termination)

### The Ultimate Tools?

Provide your input for what should be included in the ultimate [deployment tool](#), and the ultimate [installer tool](#). List the features you would like to see. This information will be used to generate a table matching available tools against these features.

### AppDeploy.com Newsletter

Join our newsletter and be advised of Application Deployment News and significant additions to the site. Your email address will

### Application Deployment Links

[Check out other sites with related subject matter.](#)

# Legacy Setups: Tools

- Applmager
  - Included with ImageCast by StorageSoft
- AutoInstall
  - By 20/20 Software
- Cognet
  - By Cognet
- EZ Install
  - By The Software Factory
- InstallAnywhere
  - By Zero G
- Application Integration Suite
  - By Wise Solutions
- InstallWatch
  - By Epsilon Squared
- Picture Taker
  - By LANovation
- Rapid Install
  - By Altiris
- SMS Installer
  - By Microsoft
- Vise Installer
  - By MindVision
- WinINSTALL
  - By Veritas





# MSI Setups: The Good/The Bad

## Benefits

- Consistent, rich command line support
- Transactional operations allow for roll back if needed
- Self-healing features allow the detection and correction of some problems at launch
- Verbose logging capabilities

## Drawbacks

- Repetitive repair events are easily possible when repackaging if proper cleanup is not performed
- Editing/transforming requires strong knowledge
- Will not update system files

# MSI Setups: Packaging Tips

- Don't test as an admin, unless everyone in your environment has admin privileges (and if so, shame on you!)
- Who requested the application? Who knows how it should be installed? How it should work? Who can validate your resulting deployment is a success?
- Document installation choices
- Document testing actions and results
- Did something go wrong along the way? Document to help prevent the same from happening again
- Revisit the ITNinja Software Library and share relevant parts of your documentation. Share what you learned and any problems you may have encountered.



# AppDeploy as ITNinja

- All deployment tips were migrated and continue to be regularly contributed today
  - There are over 6,500 tips today
- The Package KB and Software KB from AppDeploy have been merged into a single resource at ITNinja
  - Features to help search and filter this massive database have been introduced
  - We are implementing our own custom site-wide search to control the entire search experience

# Adobe Flash Player

Average Rating: 3

Views: 361959 | Created: 01/24/2007 | Followers: 1

Version: 10

Follow What You Care About

Follow this Version 1

Flash Player has 49 inventory records, 27 questions, 2 blogs and 24 links.

Quick Summary of Content

## Deployment Tips (33)

Rate Difficulty

Package Difficulty Rating

+ Add rating

Most Commonly Reported Deployment Method

Windows Installer Command Line (No MST)

Rated 2 / 5 (Somewhat Easy) based on 6 ratings

## Deployment Tip Summary

Add a Summary

Write A Deployment Summary

Notes (13)

Command Line (19)

Script (0)

Security (1)

Terminal Services (0)

Virtualization (0)

11



For its MSI implementation Adobe have opted for a 'MSI Wrapper' type of install this time around (for the one I found, ver 10.0.12.36).

The guts of the install is handled by a custom action (rather poorly named "NewCustomAction1") that runs the Nullsoft installer "FP\_AX\_MSI\_INSTALLER.exe" deferred.

There's bound to be some discussion around the merits of that. As usual we are but servants to our vendor-masters. ;-)

Show Comments

| aPacker 10/17/2008 |

# Adobe Flash Player

Average Rating: 3

Views: 361961 | Created: 01/24/2007 | Followers:1

Version: 9 ▾

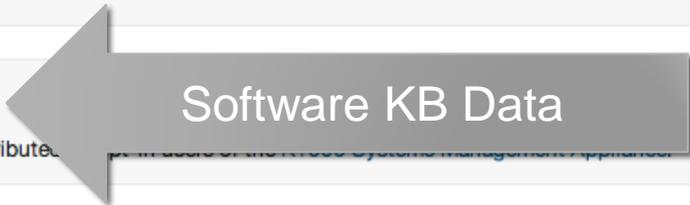
Follow this Version 1

Flash Player has **11 inventory records**, **20 Questions**, **2 Blogs** and **24 links**. Please help add to this by sharing more!

+ **Deployment Tips (33)**

- **Inventory Records (11)**

View inventory records anonymously contributed by users of the system management application.



**Versions**

9.0.246.0

9

9.0.45.0

9.0.28.0

9.0.151.0

9.0.64.0

9.0.124.0

9.0.159.0

9.0.47.0

9.0.16.0

9.0.115.0

**Flash Player**

**Version**  
9.0.246.0

**Uninstall String**  
MsiExec.exe /X{9BA8B441-9E83-4307-A582-03EC9A456C72}

# Adobe Flash Player

Average Rating: 3

Views: 361961 | Created: 01/24/2007 | Followers:1

Version: 9

Follow this Version 1

Flash Player has **11 inventory records**, **20 Questions**, **2 Blogs** and **24 links**. Please help add to this by sharing more!

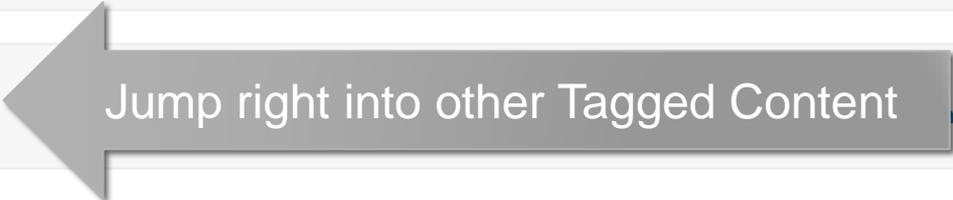
## + Deployment Tips (33)

## + Inventory Records (11)

View inventory records anonymously contributed by opt-in users of the [K1000 Systems Management Appliance](#).

## - Questions & Answers (20)

Questions & Answers related to Adobe Flash Player



1

ANSWERS

### Adobe Flash Player 11 in Windows 7 64 bits produces error 2007

By: [dbessis@comcast.net](#) 2 days ago

1

ANSWERS

### Push Application Update Packages

By: [jrasmussen](#) 3 weeks ago

3

ANSWERED

### Install Adobe Flash MSI and Disable Autoupdate (simply)

By: [barleyologist](#) 4 weeks ago

1

### What is the best way to install Adobe Flash Player?

By: [vallnz](#) 1 month ago

# Packaging Process/Workflow Solutions

- Workflow tools help you to manage packaging request, creation and documentation processes
- Often handled by folders full of documents, spreadsheets in a manual way, some products are focused on addressing these needs in a more automated way:
  - Best Desktop Solutions, SparkleFlow
  - Flexera, Workflow Manager
  - Brain Force, Packaging Robot



# MSI Setups: The Tools

- Package Studio

- By Wise
  - Then Altiris, then Symantec, now gone

- AdminStudio

- By Accessso
  - Initially InstallShield, then Macrovision, then Flexera, now Accessso

- AppDeploy Repackager

- By Dell KACE

- MSI Studio

- By ScriptLogic
  - Originally MaSal Editor, then ScriptLogic, then Quest, now Dell

- InstallAware Studio Admin

- By InstallAware

- Packaging Robot

- By Brain Force

- WinINSTALL

- Scalable Smart Packager

- By Scalable Software

- Advanced Installer

- By Caphyon

- MSI Generator

- By Infopulse



**BRAIN FORCE  
PACKAGING ROBOT**

# Why Is Packaging So Hard?

- Requires a deep understanding of Windows and how Applications work on Windows
- What are my options?
- What is the right way to handle a given application or update?
- When repackaging, what needs to be included, what needs to be excluded?

# Determining Your Options

- Is it Windows Installer based or not?
  - Don't rely on the fact you see a setup.exe
- If it is Windows Installer customize with a transform
  - Response transforms, manual/edited transforms
- If it a Windows Installer update, update your current installation source and redeploy the original package
- If it is a legacy setup, determine if vendor provided setup offers sufficient support for automated deployment
- If the setup does not meet you needs, repackaging may be necessary

# Repackaging Tips

- Packaging/Scripting vs. RePackaging
- Include what you need, remove what you don't
  - This is the art of repackaging and may take time to develop confidence in what should and should not be included
- Too Much
  - Installations may fail, uninstall may cause damage
- Too Little
  - Application may not function properly

# Demo

Package cleanup  
with the AppDeploy  
Repackager

## AppDeploy Repackager

AppDeploy Repackager has 8 Blogs, 129 Questions and 5 links.

AppDeploy  
Repackager

The AppDeploy Repackager is a freeware Windows Installer (MSI) repackager that generates silent MSI setups for deployment as well as a community-sharable recipe file. Administrators repackaging setups as Windows Installer setups to realize a custom, silent, command line installation with rollback and logging support. Such tools are traditionally expensive and so ITNinja offers this free solution with the following key features:

- A simple wizard based interface that walks you through the process of migrating legacy installations to Windows Installer format
- Shareable file format lets you share your packages and leverage those shared by your peers
- Provides (and lets you build on) an exclusion list which includes an optional description field
- May be run from network share to better keep your reference computer free of unnecessary changes



Latest version: v1.2

Release Date: 02/05/2010

Follow this Software 14

### Download

Please select your platform:

Windows

189 downloads

# Application Virtualization

Applications are virtualized, but run on local resources

- **Pros:**

- Portable
- Separation of resources
- Runs using local system resources

- **Cons:**

- Not all applications can be virtualized
  - Hardware drivers
  - Boot time services
  - Low level system components
- No True Standards
  - Proprietary and often poorly documented they can be difficult to troubleshoot



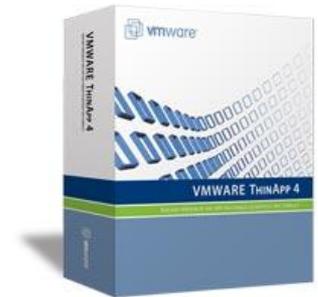
# Application Virtualization Packaging

- More forgiving when too much is included
  - Automated conversion is more practical
- Difficult to troubleshoot due to proprietary nature and lack of good tools/documentation
- Migration of existing package creation efforts
- Packaging experience builds deep understanding of application, OS components and how they interact
  - Existing skills are still very relevant and necessary to build virtual packages, as well as for managing desktop images



# App Virtualization: The Tools

- App-V
  - Formerly by Softricity, now Microsoft
- XenApp
  - From Citrix
    - Formerly Citrix WinFrame Server, Citrix MetaFrame Server and Citrix Presentation Server
- Spoon
  - Formerly Virtual Application Studio by Xenocode, now Spoon
- Symantec Endpoint Virtualization Suite (SEVS)
  - Formerly Workspace Virtualization (SWV) by Symantec, formerly Altiris Software Virtualization Solution
- ThinApp
  - Formerly ThinStall, now VMWare



# How are Your Scripting Skills?

- Batch
  - Just some commands in a text file.  
Easy.
- VBScript
  - More advanced, very capable but not too complex for a beginner to jump in and be productive
- PowerShell
  - May seem daunting if not approached with care
  - Think of PowerShell as the ultimate command line utility



DOS Batch



KiXtart



AutoIt



VBScript



HTA Script



PowerShell

# Windows 8

- Windows 8 Introduces new AppX package format
- An AppX package consists of the files that constitute an app, along with a *package manifest* file that describes the app to Windows.
- After a package is installed on a disk, it is represented as a directory.

For example:

- AppXManifest.xml
- img\tile.png
- main.htm
- program.js
- style.css

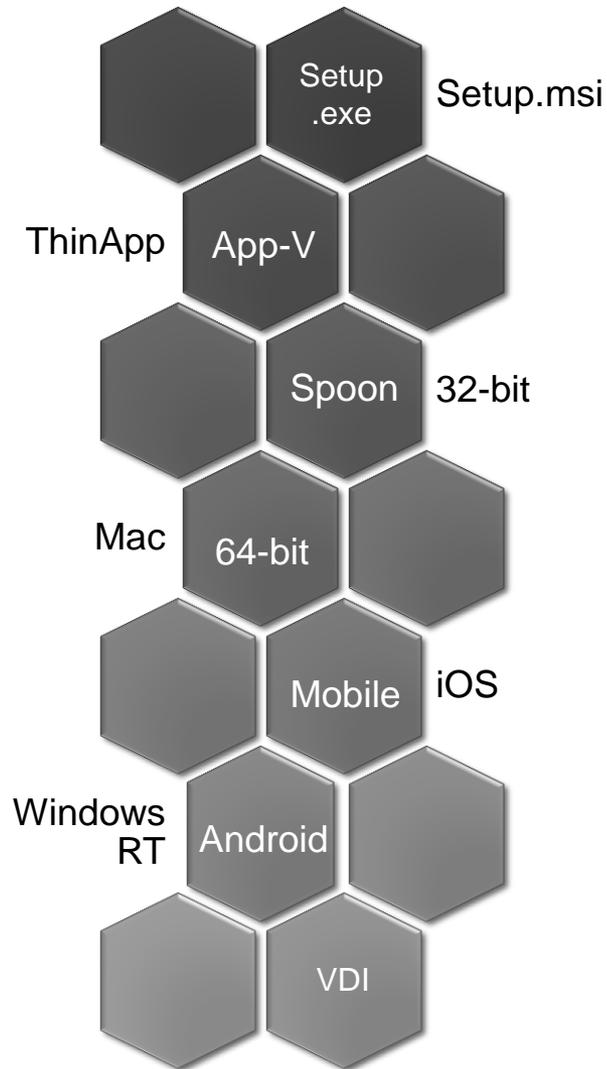


# AppX with PowerShell

- Add-AppxPackage
- Get-AppxPackageManifest
- Get-AppxPackage
- Remove-AppxPackage
- Get-AppxLastError
- Get-AppxLog
- Add-AppxProvisionedPackage
- Get-AppxProvisionedPackage
- Remove-AppxProvisionedPackage



# More Platforms = More Packages



- Systems management is (and will continue to become) more about the user and their needs and less about the device they are using.
- On paper, this seems proper and even simple
- For those of us that need to support them, things will get more complex for us long before they get easier

# Future

- It would seem that the future of packaging is here today, but that there is lots of room for incremental enhancements and maturity. Some concepts will get left behind while others evolve into more robust offerings.



# Windows To Go

- Windows To Go is a new feature of Windows 8 that allows enterprises to provision a full corporate environment that will boot from a USB drive
- 32gb USB 3.0 drive (or external USB hard drive)



# BYOD/Mobile/Virtualization

- I predict the concept of virtual corporate images that can be loaded on personal devices will gain momentum
- I foresee a convergence of this in the form of mobile devices
- Even today the concept of Windows To Go and use of a phone as a storage device make this a possibility, but later we'll even see mobile OS awareness of a corporate image



# Supporting the Cloud

- Even as the desktop of the future moves to a browser experience leveraging cloud services, there continues to be a need to package and deploy plug-ins, browser updates, players, etc.
- Soon technologies like HTML5 will lessen the demand for external browser dependencies
- Even now we are starting to see the reality of HTML5 VDI



# Conclusion

The skills of the desktop packager have evolved and pushed us forward to work with the next big thing while still leaning on the skills of the past.

This will continue for the foreseeable future—let your skills evolve and branch out into related application support paradigms.

# Q&A and Resources



The AppDeploy Repackager:  
[www.ITNinja.com/repackager](http://www.ITNinja.com/repackager)



[www.ITNinja.com/register](http://www.ITNinja.com/register)

Exclusive prizes for ITNinja members

Stickers, T-Shirts and Black belts based on level



# Join the Conversation



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# Thank You

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