



Instantly Connect 10 Gb Equipment to 40 Gb Switches

Tripp Lite Breakout Fiber Patch Panels



4 Pre-Assembled Models

Choose **Huawei FusionModule800** for Simple Data Center Management




« Previous Article **What Blockchain Means (Hint: Not Just Bitcoin), and Why You Should Care**

Next Article » **After Beating Its Own Leasing Record in 2016, DuPont Fabros Keeps Foot on Gas**

INDUSTRY PERSPECTIVES

IT Automation: What to Automate and When?

BY INDUSTRY PERSPECTIVES ON MARCH 1, 2017

ADD YOUR COMMENTS

17

Like

Tweet

7

Share

5

G+



Raju Chekuri NetEnrich

Raju Chekuri is CEO of NetEnrich.

The job of IT managers has changed in recent years. Instead of doing everything themselves, they look to introduce tools that can do the dirty work, so that they can do more planning and strategic work for the business.

It also doesn't make much sense to pay high IT salaries for time-consuming and repetitive configurations, patching, and the like. Determining what should be the company's next IT automation candidates, however, is no easy task.



The logical approach is to survey the organization's most frequent occurring problems. This could be network slowdowns (bandwidth issues), poor CPU utilization, or any number of common issues affecting users or wasting money. Yet automating those tasks, such as by automatically de-prioritizing low priority traffic (media downloads) may not fix the actual problem.

First, you first should attempt to discover the root cause. A common root cause issue is capacity. To solve that, you must analyze your top consumers of bandwidth over a period of time, and then rationalize the optimal bandwidth to allocate to various traffic segments. The lesson is, search for and fix the root cause before applying tools to a problem.

Get Daily Email News from DCK!

Email*

Country*

Please select

SUBSCRIBE

Enter your email to receive messages about offerings by Penton, its brands, affiliates and/or third-party partners, consistent with Penton's Privacy Policy.



Choose **Huawei FusionModule800** for Simple Data Center Management




Top Trending Articles

[Interxion to Build £30M London Data Center Despite Brexit Concerns](#)

[NTT Names Adams RagingWire CEO, Takes Full Ownership of Company](#)

[AWS Outage that Broke the Internet Caused by Mistyped Command](#)

[Will the Submarine Cable Boom Drive More Revenue to Colos?](#)

[Artificial Intelligence and the Evolution of Data Centers](#)

Featured Cloud Articles

[Cold Storage in the Cloud: Comparing AWS, Google, Microsoft](#)



[Top Cloud Providers Made \\$11B on IaaS in 2015, but It's Only the Beginning](#)



Featured Cooling Articles

[Dell Designs Custom Liquid Cooling System for eBay Data Centers](#)



[Yahoo Wants to Sell Its 'Chicken Coop' Data Center Designs](#)



Take an **IT automation deep dive** this April at [Data Center World](#) in Los Angeles, where Joel Sprague, principal systems engineer at General Dynamics, will talk about automation functions that have proven useful in a private cloud setting over the last five years. He will also cover tips on deciding when automation makes sense, and when it doesn't. Lastly, he will touch upon some of the advantages in agility offered by stateless computing, hybrid cloud, and cloud bursting. [Register here.](#)

Why not automate everything, you may ask, and cover all the bases? That sounds sensible in this day and age, but it's not. If a task only occurs a couple of times a year and without significant manual effort, consider the cost of acquiring and managing a tool to automate the task.

It probably won't be worth the investment. A good example is server provisioning, which now happens even less frequently given the move toward cloud-based infrastructure.

When evaluating new opportunities for IT automation, prioritize on the areas which can reduce large amounts of manual labor, improve quality, reduce defects, and simplify complex tasks so that you don't have to put senior engineers on the job.

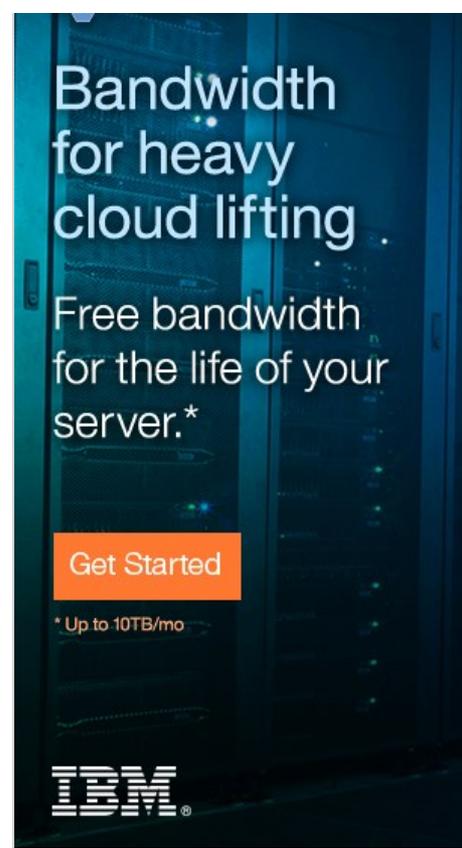
Categorize Your Manual Tasks into Three Buckets

1. **Too involved.** The process is a complex, multi-step procedure involving multiple systems and subsystems. This is a prime candidate for automation, because of the complexity involved. That increases the risk of failure from human error.
2. **Too long and tedious.** The process takes a long time to complete. For example, setting up a software-defined data center requires an individual to run manual tasks over several days, but not continually. So instead of having employee monitoring a project with long periods of dead time in between work, you automate the entire process. This can also reduce errors.
3. **Neither one.** The task fits into neither category, which means it doesn't need to be automated yet.

Prioritizing and Tools

Now that you have a list of IT automation projects, which should you take on first? It's useful to look at these activities within the three phases of infrastructure lifecycle management (ILM): provisioning, operations, and audit. Of those three areas, one of them likely has a higher impact on your business. A hosting company, for example, would prioritize on being most efficient in provisioning, because that drives revenue. Whereas, a company in which compliance is critical to staying in business should focus on automating auditing tasks first.

Finally, you'll have to make some decisions around tools. A large enterprise can afford automation suites for each core infrastructure area: networking, storage, and servers. A



Bandwidth for heavy cloud lifting

Free bandwidth for the life of your server.*

Get Started

* Up to 10TB/mo

IBM

Archived Articles

Select Month

smaller company will likely need to pick and choose. Select tools that fit the infrastructure area where your most common problems occur, or where you have the most requirements.

While there are plenty of commercial tools on the market, acquiring lots of point tools gets expensive. If your team is strong technically, go the open-source route. Your team will be able to handle the extra work involved to configure and learn the tools, and you will save a lot of money. Otherwise, choose commercial tools where ease-of-use is built in and support is always available from reputable vendors.

Today, there are many excellent reasons to focus on IT automation. It is more accurate, and usually more cost-effective. It allows for the standardization of IT processes to reliably meet business needs. Yet there's always a balance. We cannot replace humans in the data center and intelligent decision-making by experienced engineers will continue to be a highly valuable asset for CIOs and CTOs. The trick is to balance humans and machines, with a goal toward extreme efficiency and supporting business objectives.

Take an **IT automation deep dive** this April at [Data Center World](#) in Los Angeles, where Joel Sprague, principal systems engineer at General Dynamics, will talk about automation functions that have proven useful in a private cloud setting over the last five years. He will also cover tips on deciding when automation makes sense, and when it doesn't. Lastly, he will touch upon some of the advantages in agility offered by stateless computing, hybrid cloud, and cloud bursting. [Register here.](#)

Opinions expressed in the article above do not necessarily reflect the opinions of Data Center Knowledge and Penton.

Industry Perspectives is a content channel at Data Center Knowledge highlighting thought leadership in the data center arena. See our [guidelines and submission process](#) for information on participating. View previously published Industry Perspectives in our [Knowledge Library](#).

« Previous Article Next Article »
What Blockchain Means After Beating Its Own
(Hint: Not Just Bitcoin), Leasing Record in 2016,
and Why You Should DuPont Fabros Keeps
Care Foot on Gas

RESOURCE LINKS:

