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A Global Knowledge Special Report

Tech Skills Heading
the Way of the
Dinosaur:
2015 Edition

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Introduction

When we learn a concept for the first time, the newness of it tends to become embedded with the learning process. We remember the new idea's significance and forever after remember it as new. The initial impact of a discovery can prevent the concept from aging. At the same time, we realize how quickly technology advances. Is it time to evolve your expertise?

If any of the following reminiscences ring true to you, have you moved beyond them? If not, it might be time to make some new discoveries. To paraphrase the comedian Jeff Foxworthy, "You might be a tech dinosaur if... "

Windows XP / Windows Server 2003 and Earlier

In 2001, Napster (a peer-to-peer music sharing program) was shut down, the iPod was introduced and Windows XP made its debut. Do you remember your first Windows XP experience? Microsoft started delivering online security updates with Windows XP. Do you recall how much of an improvement it was over its predecessor? Do you still think of some of those advancements as new?

As of the writing of this article, the Windows XP operating system is more than 13 years old and Windows Server 2003 has been out for 12 years. To provide some context, during the early years of these operating systems, floppy disks were starting to be replaced by CDs and USB flash drives. How time flies! Windows XP is already at end of life and Windows Server 2003 will reach its end of life in July 2015. Even Windows 7 and Windows Server 2008 reached end of mainstream support at the beginning of 2015!

If your Windows expertise is entrenched in these older iterations, you might be a tech dinosaur. Stay current with Windows Server 2012 and/or Linux. Looking to the near future, I've read reports that Microsoft will introduce Windows 10 and Windows Server 10 in the second half of 2015.

PC Repair Technicians

Mobile phones were becoming essential consumer products in early 2000. Remember when flip phones were all the rage? PCs were also becoming increasingly prevalent by the turn of the century. In fact, we passed the 1GHz barrier for CPUs in 2000. PCs were evaluated by ever-increasing processor speed of a single CPU, a typical new hard drive stored around 2GB to 15GB of data, and we were still measuring RAM in megabytes. Do these numbers resonate with you?

Today's pundits are claiming we have reached the post-PC era, as smartphones and tablets increasingly grab a larger share of the computing marketplace. Laptops have been outselling desktops by a three-to-one ratio since 2009. Gartner predicts that the number of tablets shipped in 2015 will exceed PC shipments (laptops and desktops combined). These numbers suggest that the demand for PC repair specialists is correspondingly decreasing. Laptops and some tablets have replaceable components (such as batteries, hard drives and flash memory) that the average consumer can snap in and out. Many tablets are engineered without replaceable parts. If your career is founded on PC repair, you might be a tech dinosaur!

FORTRAN and COBOL

Fortran was making its first appearance on the computing scene in 1957, the same year that Elvis Presley made his last appearance on the Ed Sullivan show. COBOL came about in 1959, the same year that Alaska and Hawaii became states. If COBOL or Fortran is your primary area of expertise, you might be a tech dinosaur! While these programming languages are still in use, according to [Wanted Analytics in December 2014](#) the most in-demand languages are SQL, Java, JavaScript and C#.

Traditional Telephony

Once upon a time, a business person sat down at a desk and picked up the phone to make a call. Before voice mail, secretaries or assistants were employed for the purpose of handwriting messages!

Time Division Multiplexing (TDM) enabled the Private Branch Exchanges (PBXs) that were developed in the 1970s to evolve from the previous generation of step-by-step and crossbar PBXs. PBXs based on TDM became a communication centerpiece for enterprises. This prevalence spanned decades.

TDM-based PBXs are circuit-switched and require a dedicated connection for each phone serviced by the PBX. While enterprises still use PBXs based on circuit switching, Voice over IP (VoIP), which is packet-switched, has become the current standard. VoIP telephones connect to the PBX via the company's intranet, simplifying the wiring requirements by sharing the same cabling used by the computers. With the prevalence of VoIP, the telephone department and the IT department are no longer separate. You might be a tech dinosaur if your telephony career is based on TDM telephony!

On-Premises Server Management Skills

Have you ever driven a car with a stick shift? There is an element of satisfaction to mastering the art of changing gears. Manual transmissions used to get better gas mileage. However, if something is inconvenient to do, you're not going to do it unless it really needs to be done. Shifting gears with a stick shift is a hassle during daily commutes. Automatics get better mileage now. If an easier and better means of accomplishing a task exists, you won't keep doing things the hard way. Implementing a server — from physical connections to loading the software to configuring the operation system and commissioning the application (don't forget backups!) — was an important activity in the IT realm.

As computers became more powerful, partitioning a physical server into smaller virtual servers evolved. Virtualization has become commonplace for enterprises with needs that extend beyond more than a couple of servers. Virtualization is the foundation of cloud computing, but the two are not the same. If your server skills are centered on individual, physical, single-server implementation, you may find this an infrequently needed skill that makes you a tech dinosaur! If server management is your profession, it is important to be informed about the capabilities of virtualization and cloud computing and how they can optimize the server needs of the business you support.

Complacent Database Administration Management Professionals

Casey Kasem counted down America's top 40 radio hits starting in 1970. Perhaps you have heard his show? Computers were not initially used to process the record sales data; computations were performed manually. When computers were introduced to help with the task, Kasem originally abhorred the idea. Imagine tracking song sales today without a database! You don't have to look hard at all to see how databases impact our daily lives. Consider what banking, weather and sports would be like without them.

Since managing databases of all kinds is very important, why is that task included here? To draw your attention to big data. Traditional database platforms use a predefined structure known as schema to manage an inventory of the data where the data is located. SQL is used to access traditional Relational Database Management Systems (RDBMS). With ever-increasing means of accumulating data, the inventory of information being processed can be so complex that traditional data processing applications are not sufficient for producing the desired analysis. The objective of big data is to go beyond traditional schemas so that different types of data can be processed by an extensive range of factors.

In the article [September 2014: Fastest-Growing Tech Skills](#) based on required skills mentioned in job postings on Dice.com, Dice president Shравan Goli ranked big data skills third. While skills in RDBMS definitely do not make you a tech dinosaur, the need for individuals with big data skills suggests a terrific opportunity to parlay your experience into in-demand big data expertise!

Network Administrator without SDN Skills

J.R.R. Tolkien's book *The Lord of the Rings* has successfully translated into popular movies. Do you recall token ring networks? They did not fare as well as J.R.R. Tolkien's book. The token ring network is all but extinct. Network administrators versed in token ring had to evolve their skills to stay employed.

As with database administration management, the position of network administrator is not going to become extinct any time soon. Its appearance on this list is to point out that networks are evolving. Packet switching and TCP/IP, foundations of today's Internet, trace their origins to the Advanced Research Project Agency Network (ARPANET) project that sprang from the "Intergalactic Computer Network" concept of J.C.R. Licklider, expressed in a memo written in 1963. The need to connect computers and make data more accessible was the driving factor then, as it is now.

The type and quantity of data flowing in a network can vary dramatically. The ability for a computer network to adapt to the business communication needs it supports is the essence of a Software-Defined Network (SDN). If you are a network administrator without an understanding of how SDN can benefit your network, you might be a tech dinosaur!

Adobe Flash and Microsoft Silverlight

Ah, 1996 – the year Cal Ripkin broke Lou Gehrig's Major League Baseball record for consecutive games played! Adobe was developing Flash, and the wild dot-com era was in full swing. Adobe Flash made animation, audio, video and more available within our browser for web-surfing pleasure. You can thank Adobe Flash for that dancing baby video from *Ally McBeal*.

Adobe recognizes that the [role of flash is diminishing](#) as HTML5 has evolved as a preferred alternative. Among other reasons, HTML5 can produce multimedia content without the need to install a plug-in. Microsoft Silverlight is following the same plight as Adobe Flash.

The dancing baby has grown up, and you might be a tech dinosaur if your skills haven't grown along with it!

Conclusion

When looking for solutions to problems, we can only work from what we know. Experience counts for a lot, but it won't be useful if it doesn't incorporate current technology. When addressing the technology needs of a business, cutting-edge solutions from just a few years ago may be superseded by a newer, more effective and cost-efficient approach. Today's expert is tomorrow's history professor if that hard-earned expertise isn't continually updated. As the examples in this article have illustrated, we must keep growing our knowledge to keep up with the changes around us.

Change can be frightening because change can lead to the unknown. There is comfort in the familiar — at least it's the devil we know. Change can also be for the better — like a pay raise or a promotion. Avoiding change is not possible. Circumstances change even if we refuse to adjust. As far as your career is concerned, change should not to be avoided or feared, but rather recognized and embraced.

Take charge of your destiny by ensuring that you update your skills and keep up with the evolution of technology. Experience and perspective count for a lot, but skills and knowledge must be continually refreshed in this era of rapid change. If you are looking for inspiration, look no further than our 2015 IT Skills and Salary Report, where IT decision-makers reported that the top areas in which they are having the most difficult time finding skilled talent are IT security, network engineering, systems engineering, IT architecture and cloud computing.

About the Author

Brett Hanson is a Global Knowledge instructor of Avaya Contact Center solutions. He traces his career in the telecom industry from 1988, when he established himself as a voice-processing engineer. He specialized in voice mail integration when voice mail systems were in their infancy, training, installing and maintaining voice mail systems throughout Southern California. As call centers have evolved so has Hanson's experience and his expertise. Certified on the latest release of Avaya Aura Contact Center, Hanson has been commended for his training excellence and praised by Avaya engineers for his depth of knowledge with the product.