

# EVOLUTION OF THE IT PRO

Does the cloud mean extinction for the IT Pro? Or is it just another professional evolution? Has there ever been a decade in IT where things didn't change completely?

## 1974-1985 THE FOUNDING FATHERS

Hardcore geeks in the 70s and 80s responded to new technologies by creating dozens of companies and thousands of jobs. By 1985, PCs had made their way into homes and businesses around the world, while mainframes were still the foundation of business IT.

'74Intel introduces the 8080 processor.

Transmission Control Protocol (TCP) is specified.

'75Version 6 of UNIX is released.

Microsoft founded April 4 in Albuquerque, New Mexico. First operating system: Altair BASIC.

'76First 5.25-inch floppy disk invented.

1977 "Star Wars Episode IV: A New Hope" is released.

'77Apple II, Commodore PET and Tandy TRS-80 released. Sales build an "installed base" large enough to economically support software development.

'78Intel launches the x86 architecture with its 8086 microprocessor, achieving speeds up to 10 MHz.

'80Seagate's groundbreaking hard-disk drive can hold a staggering 5 megabytes. Cost: \$1,500.<sup>1</sup>

5MB

'80Quick and Dirty Operating System (QDOS) created by Tim Patterson of Seattle Computer Products is sold to Microsoft for \$25,000; becomes MS-DOS.

'81BMC introduces 64 kilobytes memory boards for the Prime Computer.

'80-'83Dozens of tech companies are founded, including Adobe, Compaq, Electronic Arts, Lotus, Sun Microsystems and Symantec.

'82Commodore 64 released.

'83Novell develops NetWare, a network file-sharing system that runs on CP/M and DOS.

'81IBM 5150 PC announced:

- MS-DOS 1.0
- Intel 8088 4.77MHz processor
- Up to 256 KB of memory

'821982 "TRON" premieres, first extensive use of 3-D CGI in film.

'84Microsoft announces the development of Windows.

'84Michael Dell launches his PC company and grosses more than \$73 million in first-year sales.

'85National Science Foundation links five university computer systems to form the first "Internet."

1984 The game "Tetris" is first released in USSR.

Danny Q. Dos

Habitat: Garage  
Video game console: Atari, ColecoVision, Commodore 64  
Dominant architectures: RISC, IBM System/370, MS-DOS 1.0  
Education: Higher mathematics, physics, computer science within the math department  
Present status: Early entrepreneur

## 1986-1995 THE COLD FLUORESCENT LIGHT OF DAWN

Over the next 10 years, the distributed client-server model took hold. Desktop software took a giant leap. Cell phones made their way into luxury cars. By the end of this era, there was a PC on every desk, and managing them was a new profession: The IT Pro arrives as a new employee in many corporations

'89Intel's 486 architecture is announced at Spring COMDEX.

'89SQL Server 1.0 is released.

Microsoft releases the first version of Office.

The Internet Movie Database is launched Oct. 17, 1990.

'90Hypertext standard proposed by Tim Burners-Lee — the seed that planted the Internet.

'91Linux released as the first open source system for PCs.

'93Intel releases Pentium processor running up to 66 MHz.

Microsoft releases Windows for Workgroups 3.11, firmly establishing the 32-bit era of enterprise computing.

'95Microsoft releases Windows 95 and sells 1 million copies in four days.<sup>2</sup>

Intel Pentium processor achieves 166 MHz.

Amazon.com opens for business.

Laurence Desktop

Habitat: Basement  
Video game console: Nintendo, Sega Genesis  
Relevant architectures: IBM ESA/390, Windows for Workgroups 3.11, Intel 386  
Education: Computer science, electrical engineering  
Present Status: Desktop administrator

## 1996-2005 From the Desktop to the Datacenter

As the century turned, IT Pros took the wheel and led the world steadily through Y2K. Technology drove economy and culture. Cell phones went from novel to indispensable. UNIX servers gave way to Windows Servers, and datacenters sprang up everywhere, changing the IT ecosystem once again.

'96Microsoft releases Windows NT 4.0, bringing a graphical interface and improved management functionality to business computing.

Hotmail launched, one of the first modern Web services.

Digital storage becomes more cost-effective than paper.<sup>3</sup>

'97Windows NT 4.0 Server, Enterprise Edition — a Windows Server product designed for the enterprise.

Hotmail purchased by Microsoft for \$400 million.

'99VMware releases VMware virtual platform.

Intel Pentium III reaches 600 MHz.

Melissa virus clogs Internet email systems.

'00American government and businesses spend roughly \$100 billion to fix potential "00" glitch at start of new century. Y2K passes with nary a hitch.

'01Windows XP is released.

'02HP merges with Compaq to become a big player in the PC business.

Berkeley study finds humans produced 5 exabytes of data, an increase of 3.5 exabytes from three years prior.<sup>4</sup>

'04Intel Pentium 4 reaches 3.4 GHz.

YouTube is founded and comes online Feb. 15, 2005.

2005 The Pandora Internet Radio service is launched.

Gary Gigabyte

Habitat: Office, cubicle, server room  
Video game console: Xbox, Nintendo 64, Sony PlayStation  
Relevant architectures: Windows servers, IBM zSeries mainframes, Linux, UNIX  
Education: Computer science, electrical engineering, MSCE  
Present status: Systems administrator

## 2006-2015 The Rise of Virtualization, Big Data and the Cloud

Today's factors: Virtualization. The cloud. Smartphones. Connected devices communicate over the Internet like never before. Touch, gesture and voice interfaces. An avalanche of data. In the face of it all, IT Pros are evolving again, toward software, services, data, devices and information.

'06Embedded systems shipments reach about 3 billion.<sup>5</sup>

'08Microsoft launches Windows Server 2008 with hypervisor server virtualization.

'10Humans have more than 1,200 exabytes of data. That's 12 with 22 zeros behind it for those counting.<sup>6</sup>

Microsoft releases Windows Azure cloud platform.

2010 "TRON Legacy" premieres.

'12\$62 billion spent on cloud services.<sup>7</sup>

Windows 8, Windows Server 2012 and Microsoft Surface are released.

Cody Hyperlink

Habitat: Server station  
Video game console: Xbox 360, Nintendo Wii, PlayStation III, PC  
Relevant architectures: Windows Server 2012, cloud, virtual servers, IBM zEnterprise, Windows Embedded, iOS, Android  
Education: Computer science, electrical engineering, data engineering  
Present status: Upwardly mobile

**2012 EVERY MINUTE**

72 hours of video uploaded<sup>8</sup>

684,478 pieces of content shared<sup>9</sup>

175,000 tweets sent<sup>10</sup>

7,610 searches initiated<sup>10</sup>

'11-'15IT Job Growth **4.3%**

Cloud-Related Job Growth **26%**

New Cloud-Related Jobs Could Reach **7 Million**<sup>11</sup>

'13Skype announces its users spend 2 billion minutes per day on the service.<sup>12</sup>

'14Embedded systems shipments (projected): 6 billion.<sup>5</sup>

Projected revenue for SaaS providers: \$75 billion.<sup>13</sup>

'15U.S. Internet projected to be 50 times larger than it was in 2006.<sup>14</sup>

## 2015 AND BEYOND

In the decade beyond, mobile devices will number into the billions and connected devices in the tens of billions, feeding into an expanding enterprise IT infrastructure. The amount of data generated necessitates a move by most large organizations to the cloud. IT Pros, as always, continue to adapt and evolve ....

**FASTEST GROWING JOBS IN 2016**  
U.S. Bureau of Labor Statistics

53.4% Network Systems and Data Communications Analysts

44.6% Applications Software Engineers

29% Systems Analysts

28.6% Database Administrators

28.2% Computer and Systems Software Engineers

'16Public cloud services market will break through the \$100 billion mark.<sup>7</sup>

FLYNN

Your datacenter and our cloud—working together.

Sources:  
<sup>1</sup> <http://gizmodo.com/5495502/seagate-st-506-486dd-of-modern-hard-drives>  
<sup>2</sup> <http://news.bbc.co.uk/1/hi/english/tech/1911111.stm>  
<sup>3</sup> <http://www2.sims.berkeley.edu/research/projects/how-much-info>  
<sup>4</sup> <http://www2.sims.berkeley.edu/research/projects/how-much-info>  
<sup>5</sup> <http://www2.sims.berkeley.edu/research/projects/how-much-info>  
<sup>6</sup> <http://www2.sims.berkeley.edu/research/projects/how-much-info>  
<sup>7</sup> <http://www2.sims.berkeley.edu/research/projects/how-much-info>  
<sup>8</sup> <http://www2.sims.berkeley.edu/research/projects/how-much-info>  
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