

HACKING

BEGINNER'S CRASH COURSE TO COMPUTER HACKING

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HACKING BEGINNER'S CRASH COURSE TO COMPUTER HACKING

(How To Hack, Penetration Testing, Basic Security)

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Introduction

Hacking is done by making changes or modifications to any computer hardware and software system. As we know, Illegal breaking of a computer system is an offensive crime and should be prevented; a hacking spurt of computer systems leads to several courses on ethical hacking. There are two different types of hackers: An ethical hacker(knowns a white hat) and a black hat.

A moral hacker is also known as 'white hat' hacker executing the penetration as well as intrusion testing. Ethical hacking makes it possible for you to legally hacking and penetrating into a computer system and its database. It basically secures the loopholes and breaches within the cyber-security system of an organization. To prevent any potential threat to the computer security system or network, legal hacking experts get hired and are generally Certified Ethical Hackers.

Ethical hacking courses have gathered enormous responses in the competitive human race. Courses for ethical hacking have turned out to be far and wide fashionable and many are taking it up as a serious profession.

There are some specific threats and issues concerning computer hacking. One must have knowledge of understanding Information Security with the true sense of terms. As a professional you may face some basic threats while securing a security system for an organization such as: Password Thefts, Virus Threats, E-mail based Extortion, Malicious Programs, and Online Theft

PROTECTING THE CONFIDENTIAL DATA WITH ETHICAL HACKING

Ethical hackers will help in providing security to different IT systems. It results in safety and security of an organization or a company. Black hat hackers and white hackers can crack the alternatives with their own capability and it can be generation of any other system also.

After taking your time to go through this book you will find yourself in a good position as a professional ethical hacker who can support different organizations in their security paradigms.

The first step is to secure the hardware on which all the valuable information is stored and by which it moves across the network. Basically, it means limiting anybody who will touch the

computer, and preventing accessing the relevant database with the authorization details.

To protect your information and network from all types of threats and loss that can be done through computer hacking, however physical security can make a lot of difference. Well in physical security, computers must also be properly protected from natural disasters and accidental damage in addition to deliberate acts.

Every organization is concerned strongly with their security issues. They never want their data to be hacked by their competitors or for any misuse. So for the purpose of security testing, professional hackers who conduct ethical hacking efficiently are hired by companies for conducting penetration testing.

These professional hackers are specialists in securing a computer and representing a company with a security auction. To be a professional ethical hacker, you need to be aware of all the latest social engineering techniques so that relevant measures may be in use to secure them properly

REASONS TO PERFORM PENETRATION TESTING

1) It aids managing risk appropriately and well - This is probably the most important aspect of penetration testing, to detect the vulnerable points related to the developed web app.

One of the main reasons that an organization finances penetration technique is to make their app secure against attacks of an outside source. Penetration tests help in the detection and categorization of risks as high/medium or low.

2) Also, it helps increase business performance and stability - One of the main concerns of any business organization is a breach in their process of working or business due to systems crashing.

Penetration testing helps to make the system full proof against external attacks which in turn helps to make the system a strong one which will not be crashing as often as the non-tested ones. Penetration test helps in detection of the various vulnerable points of your

web app which can be rectified.

3) Penetration testing also helps in minimizing Client-side Attacks - Paying attention to just the system security is not a good idea. Organizations need to pay attention to the security of the patch files and the files which are required during the updating process of the system in order to protect the system from client side attacks.

4) It help protect all the members in an organization including your clients - When a system security is breached, it does not only harm the organization which is the target of the attack. It also causes potential harm to the clientele, third party associated and the partners of the said organization. Penetration testing helps in determining the weak links of your system so that they can be made more secure and hence protects all the concerns.

5) Comply with Regulation or Security Certification - When penetration testing is done at certain interval of time helps in maintaining a high security level of the web app that you have produced. This in turn helps to maintain the standards set by the various boards of certification which have been set up to maintain the standards of the various software which gives a certain benefit to the developed software

6) Helps in evaluation of Security Investment - You may already have a security system. But how secure is your system? What kind of attacks is it capable of defending? Security testing helps you to determine how well you system is defended by the various posing threats with the help of the already existing security system. This test will bring forth the efficiency of the security system so that you can further improve it based on the requirements.

7) Protect Public Relationships And Brand Issues - Developing goodwill for your brand and a healthy relationship with your clients will require years of devotion and hard work.

However, a tiny security breach is enough to crumble down all these efforts. Penetration

testing will ensure that this security breach is avoided so that you can successfully maintain your brand image in the competitive market.

Now that you are aware of the various benefits of the penetration testing process, be sure to perform it regularly in order to keep your system up to date against posing threat

Chapter 1- An Overview Of Computer Hacking

PENETRATION TESTING

Penetration testing is an authorized attempt to exploit computer systems to make them more secure. When given an assignment by your company on security audit in the organization, you have the responsibility to investigate the concept that proves vulnerabilities are real.

After the process of penetration testing is done, mitigation measures are made to address and fix the issues that were discovered during the test and this helps an organization curb future threats on their network and computers. The bottom line issue is to identify, address and mitigate security issues before malicious hackers exploit the computer systems.

Penetration testing also known as Pen testing or Ethical hacking. There is a thin line between penetration testing and vulnerability assessment. These terms are incorrectly used interchangeably by the security team.

A vulnerability assessment is an assessment responsible in evaluating systems for potential security issues. Penetration test is a test that exploits and proves concepts that show security issues exist. The test is also responsible for stimulating a hacker's activity and delivering the payload.

DIFFERENCE BETWEEN ETHICAL AND BAD HACKERS

Motivation or purpose of hacking is one way of differentiating between a malicious hacker and an ethical hacker. A malicious hacker is motivated by revenge, collecting money from the victim among others. He or she is also known as a Black hat. However an ethical hacker is motivated by good things like helping the organization to improve their security threats. He or she is also known as a White hat.

When the intention is to help the organization improve their security through identifying the mitigations of vulnerabilities, then the attacker is considered a white hat. Ethical hackers don't share sensitive information discovered during ethical hacking, however if the intent is for personal gain, the hacker is considered a black hat.

Penetration tests are not usually carried out the same way or neither do they have the same purpose and the test is responsible for the security of a given organization. White box penetration testing / “overt” testing is very thorough and comprehensive and examines any loophole of the system network. It is also able to discover more vulnerabilities in a network.

However the test has some limitations such like, it does not provide accurate simulation of how modern day skilled attackers exploit networks. Secondly it also does not provide a chance for the organization to test its incident response.

A black box penetration/covert is a simulation of how a skilled attacker would attempt to gain access to the target systems and networks. Black box test is thorough and it has the ability to detect vulnerabilities that are undetectable. The tester is only required to locate and exploit a single vulnerability.

Unlike the white box, black box is more close to new models and shows how attacks take place. Black box also allows a company to test its incident response procedures and determine if their defense is strong and can withstand attackers. Black box has limitations also whereby, its process can be detected by firewalls and intrusion detection systems. Malicious hackers are discrete and they only interrogate a single service to compromise the target.

HACKING LAB

A hacking lab is a sandboxed environment where your traffic and attacks have no chance of escaping or reaching unauthorized and unintended targets. The lab is home where ethical practice on their skills. The lab helps newcomers to learn and use hacking tools without breaking laws or attacking unauthorized target.

Chapter 2- Understanding Ethical Hacking

Ethical Hacking is an act of performing and testing security on IT infrastructure with proper authorization from a company or organization. A person performing ethical hacking is known as ethical hacker or computer security expert. An ethical hacker will use latest hacking tools and social engineering techniques to identify vulnerabilities on IT infrastructure.

Overall the ethical hacking provides risk assessment about the security of IT infrastructure for a company or organization information systems. These risk assessment information will provide the level of security that can be exploited by a hacker.

On the other hand, hacker is a person who breaks into IT infrastructure or computer networks without any authorization. Hackers mostly hack for profit or motivated by challenge. These exploitation can cause financial lost, legal impart and trust towards the organization.

THE IMPORTANCE OF IT SECURITY

Nowadays all the companies or organizations are using and depending on IT infrastructure, computer networks and computer systems to operate their core businesses. Most companies store their client information in the server database systems. A good hacker will easily break into customer database if weak passwords are utilized on the server.

Definitely this will cause heavy financial losses to the company. Mostly these hacked incidents will not be reported in the media in detail because it will spoil the company's reputation.

Moreover shopping and bill payments are performed online these days. Therefore client's credit card information must be protected at all cost. One of the most famous method to gain client's credit card information is by performing spoofing.

Objective of spoofing is to fool the user into thinking that they are connected to the trusted website.

Most attacks are implemented utilizing emails these days. A good example would be the Love Letter worm attacks performed. Millions of computers have been attacked and made changes to the users' system itself. The Love Letter worms are received using email attachments.

IT security is crucial to the organization and individual computer users. Individual computer users must make sure they have installed the latest antivirus and anti-spyware in their computers. Companies must ensure they have engaged a computer security expert to look into their computer network security issues.

ETHICAL HACKING PROCEDURES AND STRATEGIES

The first step in performing ethical hacking is to understand a hacker's process.

There are basically five main steps and processes of hacking:

- 1) Gaining targeted information
- 2) Probing vulnerabilities for exploitation
- 3) Gaining access to the targeted system
- 4) Maintaining access on targeted system
- 5) Covering the tracks on targeted system.

The targeted system is mostly referring to the machine to be hacked. It can represent a server or computer or any electronic devices. The hacker will perform the five steps mentioned above to gain control or steal information or stop the machine services. Each steps above may take a few months to achieve the desired goal.

An ethical hacker will perform the same steps above to further understand the weaknesses of the targeted system. Once the weaknesses are identified, the ethical hacker will take steps for countermeasure to avoid further exploitation on the targeted system.

Chapter 3 - Hacking Tools For Gaining Targeted Information

Basically there are two ways of gaining information. **Passive methods** involve acquiring information without direct interaction with the targeted system. One of the few ways of passive methods are acquiring publicly available information, social engineering and dumpster diving.

Dumpster diving is a process of looking for information in an organization's trash for discarded information. Social engineering is another process by making friends or smooth talk with staffs in the organization to reveal server passwords, security codes and etc.

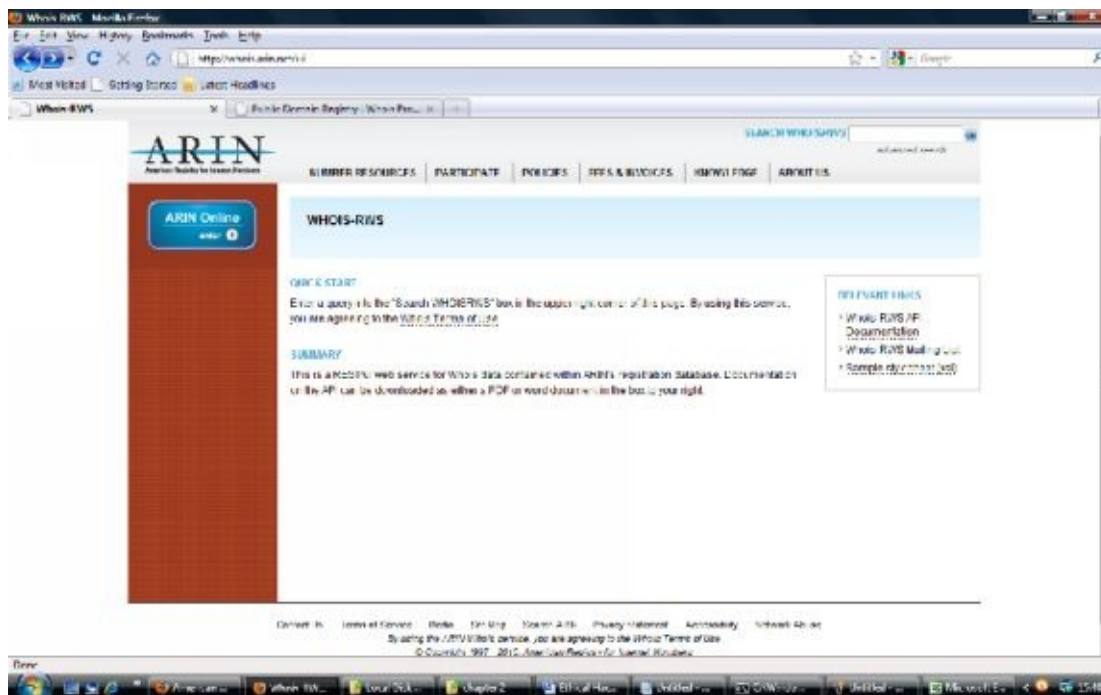
Whereas **active methods** are utilizing tools to detect open ports, types of operating systems installed on target system and purpose of applications and services available on the targeted system.

Social engineering is the most deadly and effective way of gaining information on targeted system. Most previous employees that dislike the company management are potential threat for social engineering.

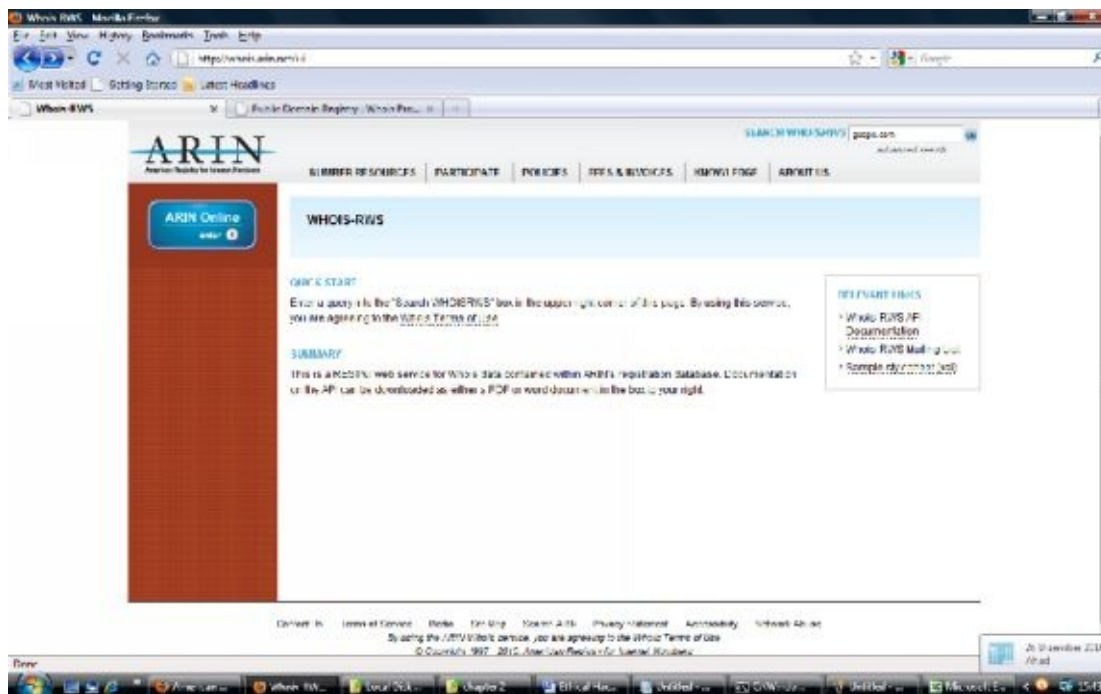
Using software tools to gain targeted information is categorized as Active Method. The most common and popular tools used for gaining targeted information are as below:

1) ARIN

ARIN (American Registry for Internet Numbers) founded in the year 1997. It is a non-profit organization that registers and administers IP numbers for North America, some regions of the Caribbean and sub-Saharan Africa. ARIN is one of four regional Internet registries. ARIN also provides services to the technical coordination and management of Internet numbers.



Enter the desired domain name highlighted below. Only choose domain names from North America, some regions of the Caribbean and sub-Saharan Africa.



Click on the arrow button next to the search box highlighted above and results will be shown as below.



Upon clicking on the selected list shown from the previous page, the information about the domain will be display as shown below.

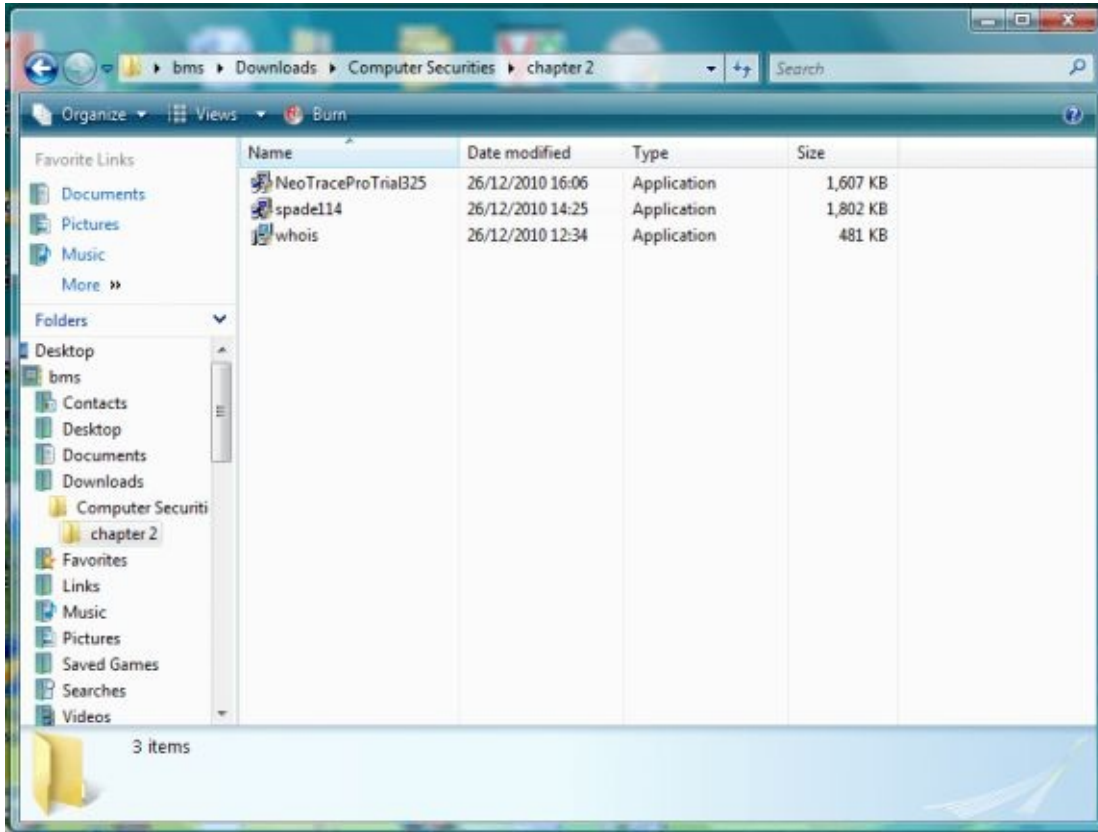


2) Neo Trace

NeoTrace is an investigative tool which traces the network path across the Internet from the host system to a target system from the Internet. The software provides good information about

registration details for the owner of each computer and the network of each node IP that is registered. It provides a world map displaying the locations of nodes of the route.

Double click on the file name NeoTraceProTrial325 to perform the installation.



Click 'Next' button until installation is completed successfully



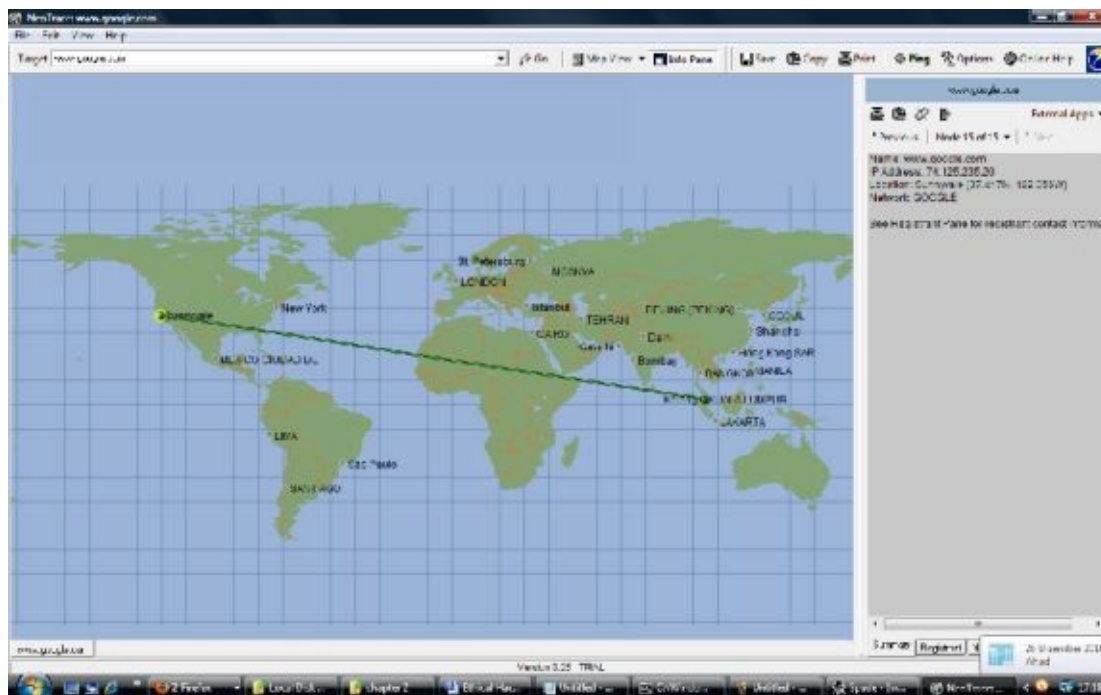
Once the installation is completed, Neo Trace screen will pop-up as shown below.



Just type the desired domain name on the highlighted area below. In these situation, www.google.com is type at the type box highlighted.



Click the 'go' button to produce the results as shown below. These results are in 'Map View' format where by it shows the geographical locations of the network node.



Select the 'Node View' option in the highlighted are.



Chapter 4- Best Discernig Tools For Computer Weaknesses

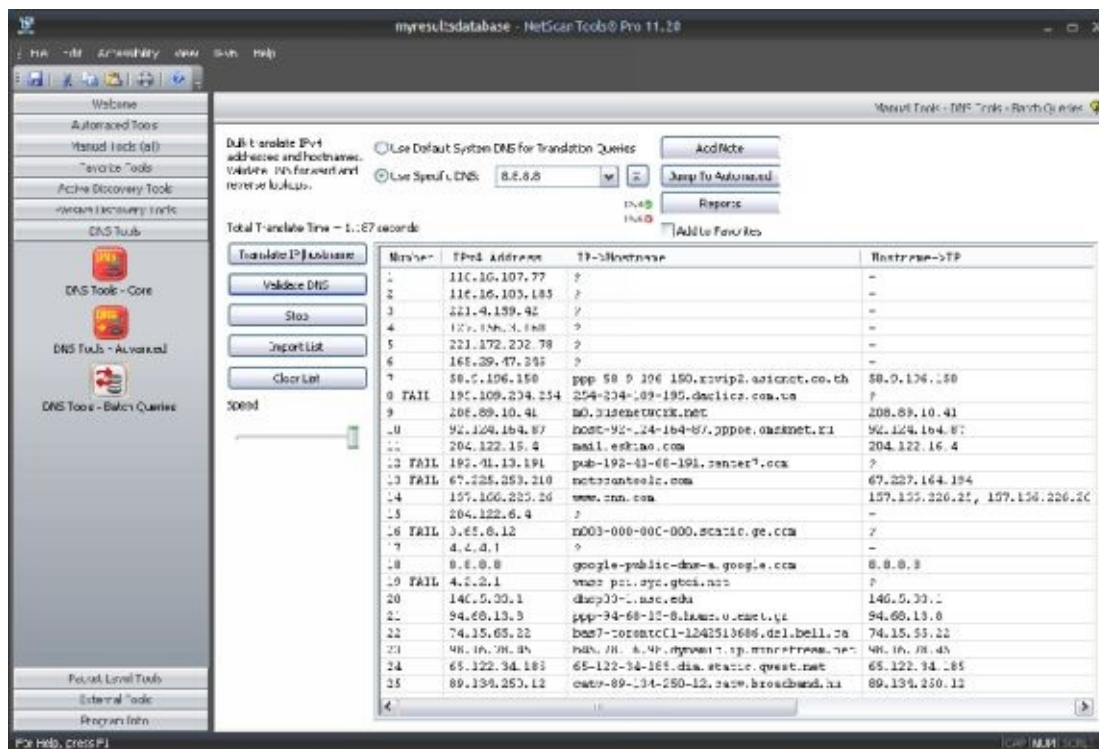
If you ever think that any existing network is fully protected from any attacks, it is best to humble yourself and test run the proposed tools below to audit any computer networks. These tools may even provide suggestions to fix the network security issues: Port Scanning, NMAP, NetScan, Vulnerability Scanning, WebCruiser, GFI LandGuard, Network Packet Scanning (Widely known as network sniffing), WireShark and Etherea

NETSCAN

If anyone is looking for network scanner toolkit application, it would be NetScan where by it comes with a bundle of important network tools to audit the network.

The network tools bundle are as: DNS Tools - Simple: simple IP/hostname resolution, Who Am I? (shows your computer name, IP and DNSs), Ping, Graphical Ping, Traceroute, Ping Scanner, Whois

Sample NetScan results for DNS scanning mode:



DNS verified results with DNS failures are noted in the left column. This test will list DNS records for a domain in priority order. The DNS scanning was run directly against the domain's

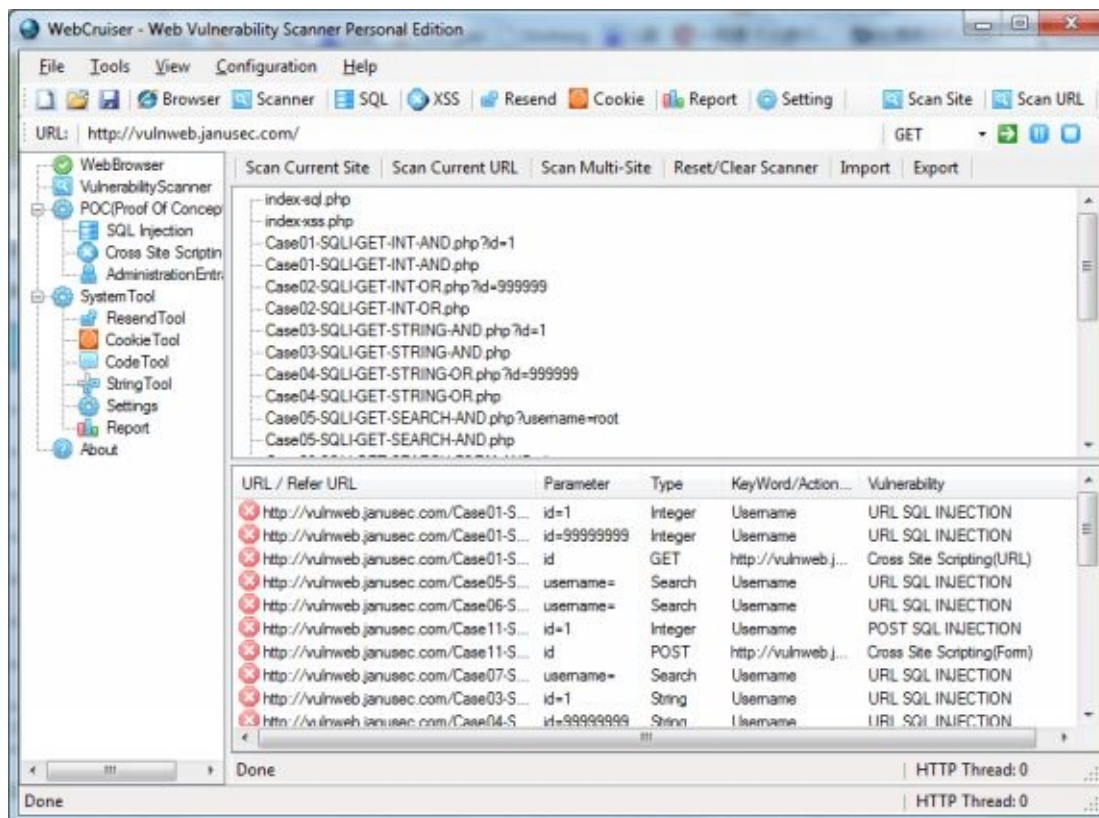
authoritative name server, so changes to DNS Records should appear instantly. By default, the DNS scanning tool will return an IP address if you give it a name.

WEBCRUISER

The earlier tools will only detect the network securities on surface level which are port scanning, dns records, host service,ip address and OS versions.

These types of scanning and information will not be enough to ensure to the computer network securities. Whereas software tools like Webcruiser will scan more information about the network security towards the host applications.

Basically this software tool performs the network exploitation in the early stage, and then provides the vulnerability information. The following page shows an example of exploitation processes and vulnerability results from Webcruiser:

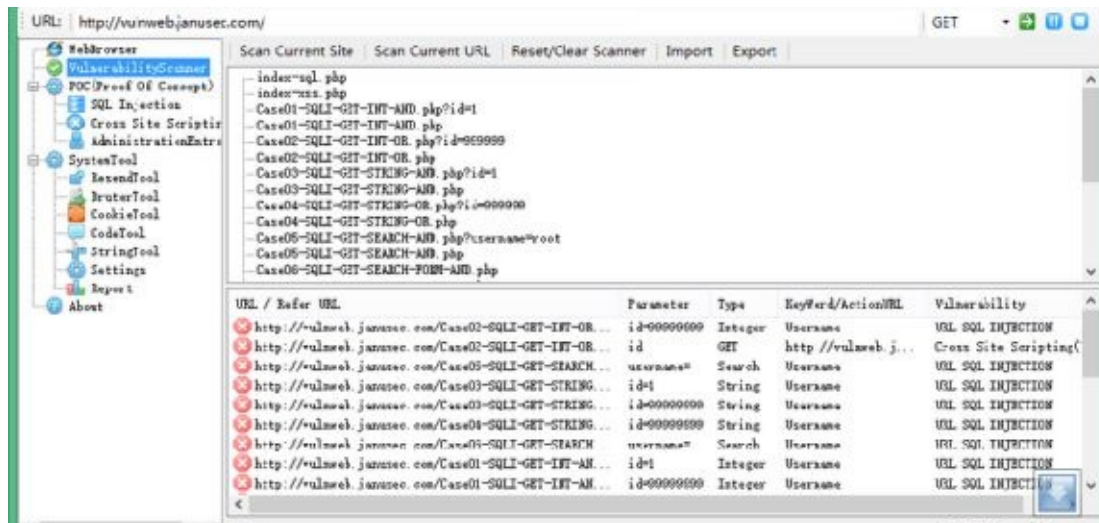


The results shows that Webcruiser has perform various possibilites of SQL Injection and cross site scripting at host url <http://vulnweb.janusec.com> with some strings and ID parameters to exploit the database application. Finally the SQL Injection will display the results of data which was saved in the database.

A perfect tool for auditing SQL Injection activities would be Webcruiser tool. A good hacker will get access to all the table records in a database by simply applying 105 or 1=1 into the sql statements. Below is a basic example of a sql statement that can cause SQL Injection.

```
SELECT * FROM Users WHERE UserId = 105 or 1=1
```

Basically the injected SQL commands can alter SQL statements and compromise or exploit the security of a web application. Webcruiser tool can simply execute the SQL Injection testing activities without need of the constructing any sql statements.

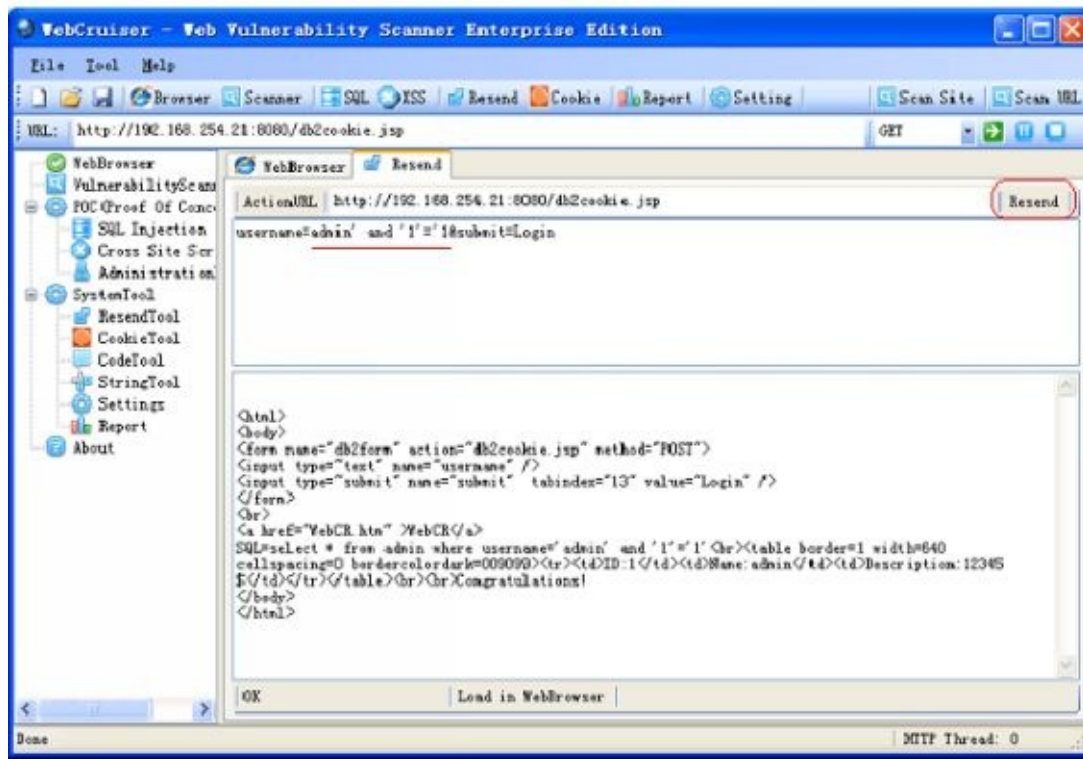


The above screenshot demonstrates the SQL Injection activities performed by Webcruiser. Overall Webcruiser can perform several types of SQL Injections below:

1) Post SQL Injection 2) Cookie SQL Injection 3) Cross Site SQL Injection 4) XPath Injection

Quick simple steps below to use Webcruiser tool

Modify the value of username to admin' and '1'='1



Chapter 5- Executing Attacks On A Computer Or A Network

Gaining access is the most dangerous phase in the hacking process. Basically the hackers will initiate attacks on the computer systems. There are several types of attacks that can be performed by the hacker: Buffer overflow, Denial of service, Session hijacking, SQL Injection, Trojans, Password Cracking and Worms and Viruses

There are many type of attacks that can be found but the items above are the most common tactics used by hackers.

A buffer overflow happens when data written to a buffer with insufficient bounds checking and eventually corrupts the data values in memory addresses next to the allocated buffer. Mostly this situation happens when string characters copied from one buffer to another.

A denial-of-service attack is an attempt to make a computer resource or service completely unavailable to the users. This kind of attack will continuously send data packets to the computer system until the system is exhausted and unable to provide the configured service to the users.

Session hijacking is exploitation of a valid computer sessions which is known as a session key. These sessions will allow hackers to gain unauthorized access to a particular information or services in a computer system. Mostly it is used to refer to the hackers acquiring a unique cookie used to authenticate or validate a user to a remote server.

Trojan is a malware that's performs a function for the user to run or install but instead executes unauthorized access of the user's computer system. Users are usually tricked into loading and executing Trojans on their systems.

Password cracking is a process of recovering passwords from a computer that has been stored or transmitted by the users. Usually password cracking tools will repeatedly try to guess for the password. The purpose of password cracking is to help a user to recover a forgotten password, gain unauthorized access to a system, and provide preventive measure by system administrators to check for password strength.

A computer worm and virus performs self-replication through computer networks by sending copies of itself to other computer network. The main difference between a virus and a worm is that a worm does not need to attach itself to an existing program. Worms will cause some harm to the computer network by at least consuming bandwidth but a virus will corrupt or modify files on a targeted computer.

Overall the attacks described above can cause serious harm to computer networks and architecture. Basically these attacks will take control of the computer systems in the organization.

Best And Good Software Tools To Attack A Computer Or Network

The software tools suggested are more for educational and testing purposes. A proper testing environment should be established before using the tools to attack a network.

Below are some of the software tools that can be used to perform some attacks over the network: Denial of Service(Colasoft Packet Builder), Password Cracking tools (Cain and Abel, L0phtCrack), Web Copier Tools to Perform Phishing Attacks (HTTrack and webcopier) and Buffre Overflow (Buffer Overflow is C/C++ Programming)

Testing the tools above can cause the computer to hang or slow down the speed of the computer. It is better to use a dedicated old computer to execute the software tools above. The software tools are mostly used by beginners to explore computer attacks.

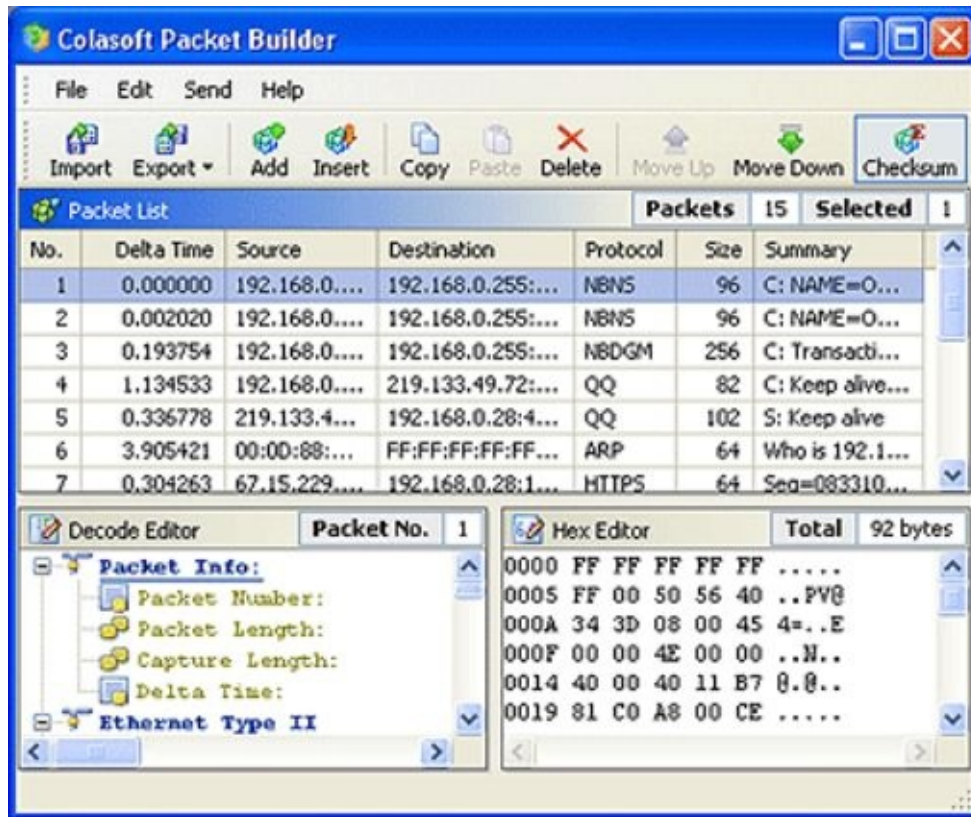
THE DENIAL SERVICES

Colasoft Packet Builder

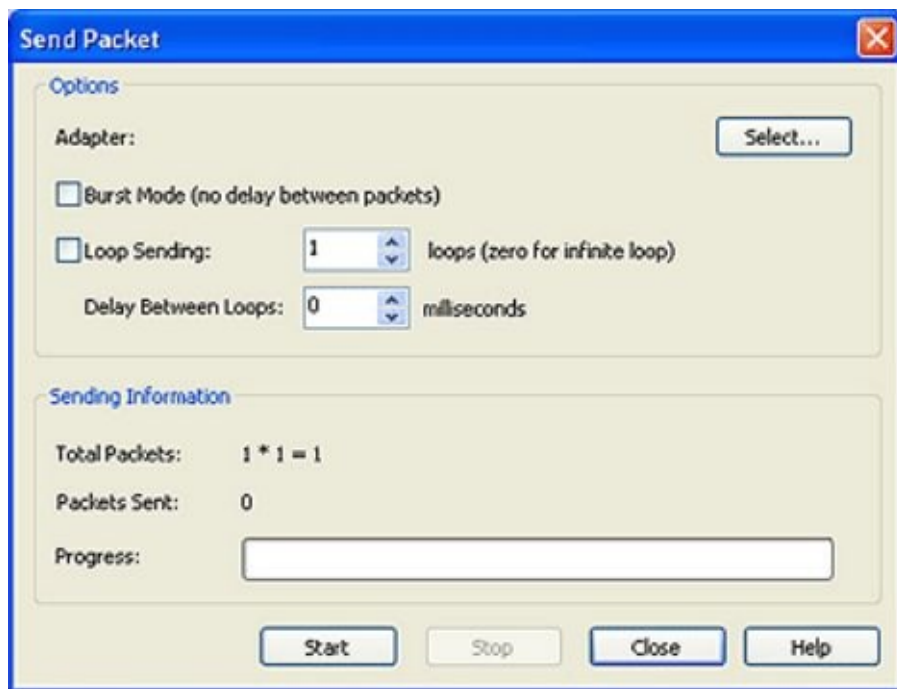
A simple denial of service attack would be typing a ping at command prompt which will send a Internet Control Message Protocol (ICMP) Echo Request messages to the destination computer and waiting for a response.

However this will definitely would not be enough to initiate a DOS attack. Colasoft Packet Builder is handy enough to initiate a DOS attack over a network. Colasoft Packet Builder provides an interface for end user to craft a custom network packet.

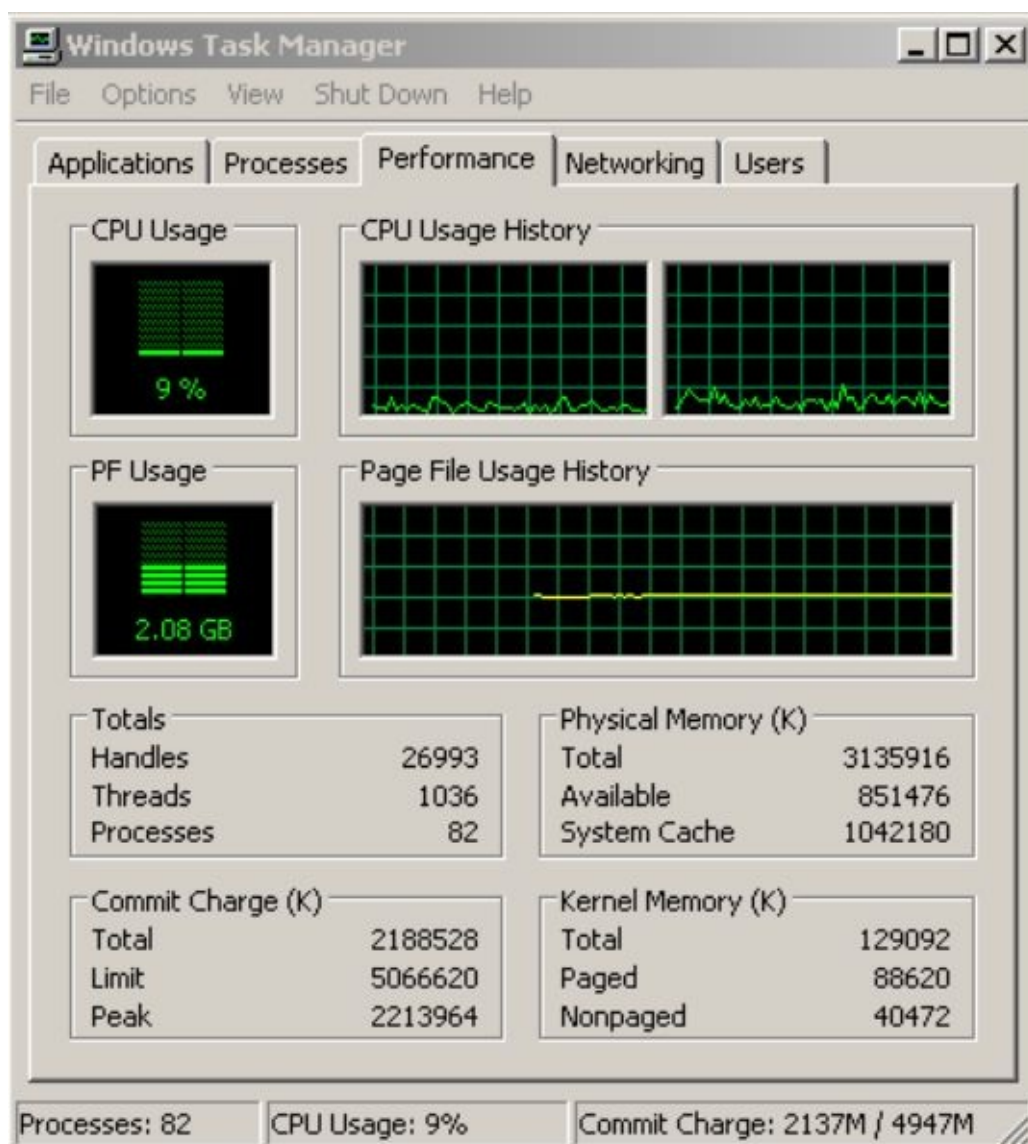
The end user is able to craft the types of following packets such as Ethernet Packet, ARP Packet, IP Packet, TCP Packet and UDP Packet, and change the parameters in the decoder editor, hexadecimal editor or ASCII editor as shown below.



An existing network packets can be obtain from Colasoft Capsa, Wireshark, Ethereal and etc to simplify the network crafting work by adding and inserting packet command in edit menu or toolbar. Finally the packets can be send over the network by clicking the start button.



Just change the Loop Sending option to 0 for a infinite loop which will cause a denial of service attack to the host. Some firewalls are able to detect and block denial of service attacks. It would be good to shutdown the personal firewall for experimental and learning purposes.



Plus type taskmgr at command prompt and click at the performance tab to observe the computer resources while network packets are sent over the network. When the cpu usage has reached 100%, then Colasoft Packet Builder has successfully performed a denial of service.

PASSWORD CRACKING TOOLS

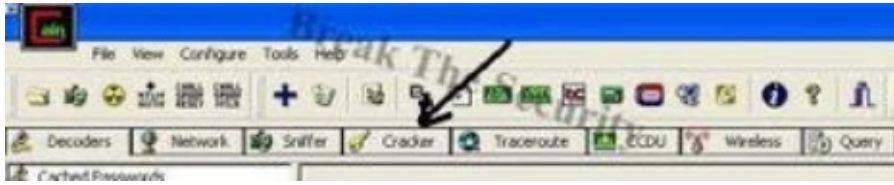
Cain and Abel

One of the most interesting tools to explore would be Cain and Abel. This software tool can crack almost any type of encryption protection. Cain and Abel tool is always useful for password recovery task. The most popular encryptions are : MD4 hashes, MD5 hashes, SHA-1 hashes, SHA-2 hashes, MSSQL hashes ,MySQL hashes and WEP (Wireless Encryption Protocol)

Let take an example of cracking a MD5 hash using Cain and Abel software tool to reveal the

actual information. Normally MD5 data can be obtain in any MySQL databases which is used to concile user passwords.

1) The first step - Click on the Cracker Tab



2) The second step - Select MD5 Hashes in sidebar



3) The third step - Right click on the blank sheet and select "add to list" option.

4) The fourth step - A pop-up box will appear and copy and paste the hash code in that box and hit ok button. For instance, let us take this hash code c3ea886e7d47f5c49a7d092fadb0c03b




5) The firth step - Right click on the hash code and select the Method. Select

Brute Force Attack

6) The sixth step - would to Click "Start" button below to start the cracking of passwords.



When the MD5 hash has been successfully cracked then results will be shown as below.

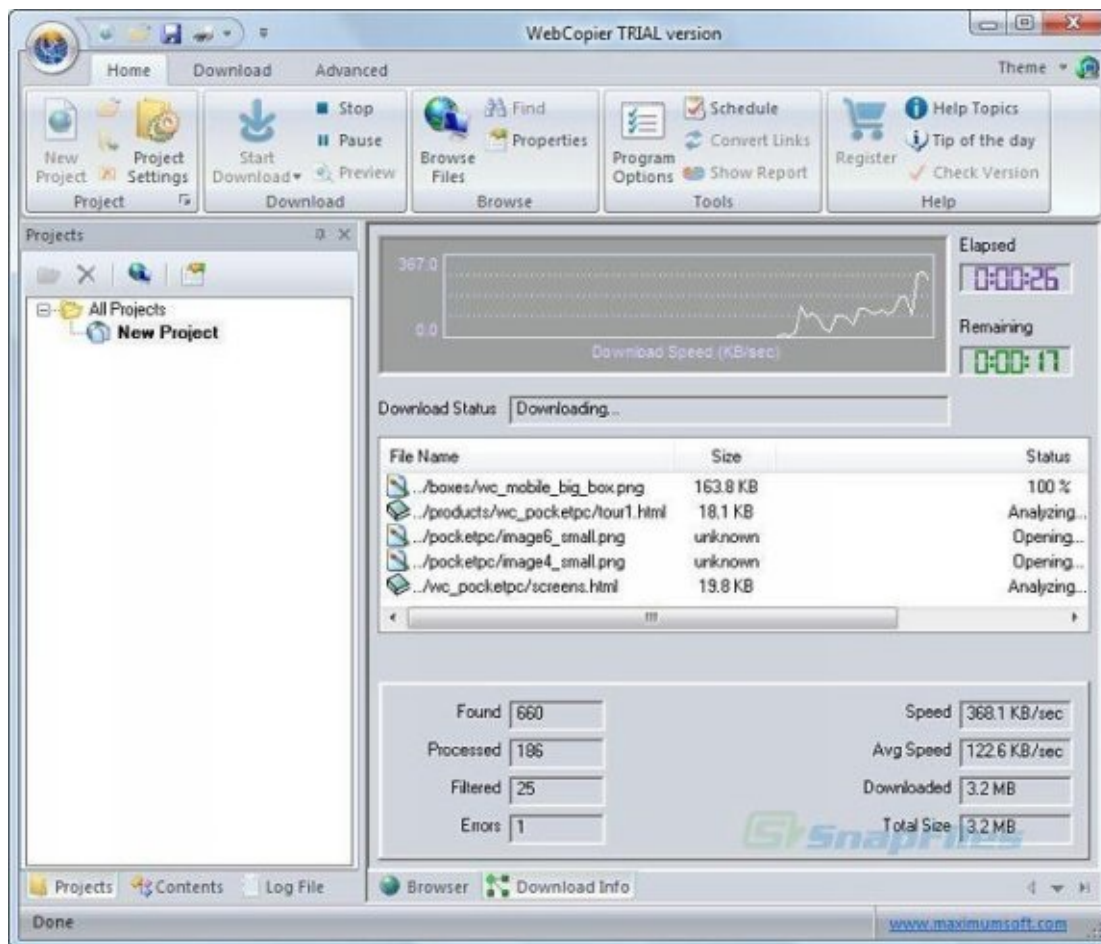
MD5 Hash	Password	Note
 c3ea886e7d47f5c49a7d...	bits	

WEBCOPIER

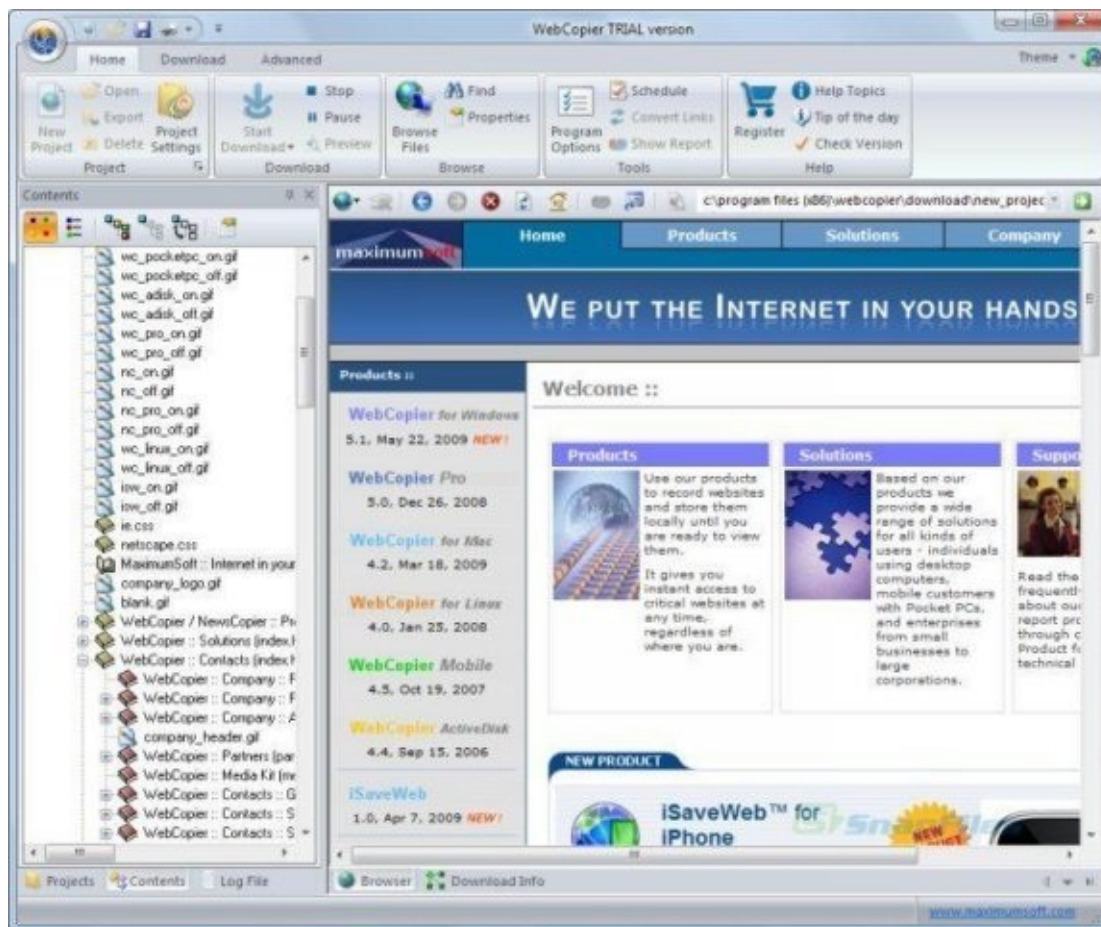
Webcopier is a fantastic tool to copy any websites offline and store the website files in the laptop. Webcopier even copies website with javascript and supports proxy servers and HTTP authorization. The copied website files can be used for phishing activities to perform an attack.

All the files copied can be hosted on another webhosting server with similar domain names. End user will not be able to recognize the domain names quickly but recognized the websites design immediately. Eventually the end user will provide the particulars like username, passwords, credit card details and etc. Finally the attacker can exploit the end user with these details from the actual websites or domains.

An example of Webcopier tool



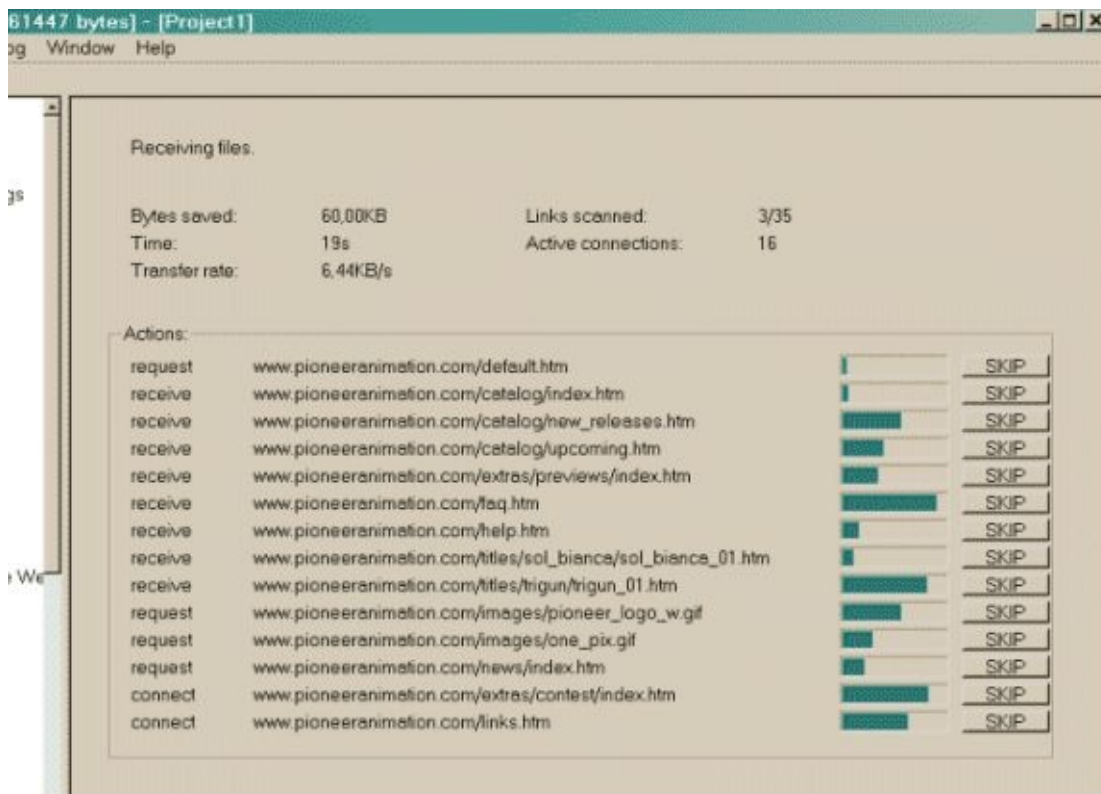
Screenshot shows the website files being copied to the local computer and upon completion the results shows as below:



Webcopier also allows to browse the website files as shown above and have preview of the html content.

HTTrack

Another software tool that performs like Webcopier is HTTrack. This tool is absolutely free and it is GPL license. HTTrack has more features than Webcopier and it is able to handle websites with huge files. Plus it also allows to control the amount and the type of website files to be downloaded.



This is recommended for an intermediate end user and below shows the screenshots for HTTrack for download files from the targeted website:

Basic concept to use HTTrack:

1. Choose your project to organize the downloads
2. Drag and drop several websites for downloading
3. Precisely choose the options for downloading
4. For example, filters is a powerful way to select or refuse selective links.
5. Start to download the website files.

BUFFER OVERFLOW

Buffer Overflow is a common error programming mistakes in a software application. Therefore proper auditing should be performed on any software application in an organization. Before explaining into details about Buffer Overflow, the concept of Buffer Overflow should be defined properly.

A buffer is a memory allocated to contain anything from a character string to an array of integers.

A buffer overflow occurs when more data is assigned into a fixed-length buffer than the buffer is able to handle. When the buffer is not able to handle the data supplied then the adjacent memory space becomes overwritten and finally get corrupted. This is will lead to a situation where by the system will crash.

Mostly C/C++ applications are frequent targets of buffer overflow attacks. C/C++ applications have no mechanism to check for buffer overflows. C/C++ developers should avoid standard library functions which have no checks for functions like scanf and strcpy.

Below is sample C/C++ programming code for Buffer Overflow exploitation.

```
#include <stdio.h>

#include <string.h>

int main(void)
{
    char buff[15];

    int pass = 0;

    printf("\n Enter the password : \n");

    gets(buff);

    if(strcmp(buff, "thegeekstuff"))
    {
        printf ("\n Wrong Password \n");
    }
    else
    {
        printf ("\n Correct Password \n");

        pass = 1;
    }
}
```

```

}

if(pass)

{
    /* Now Give root or admin rights to user*/

    printf ("\n Root privileges given to the user \n");

}

return 0;

}

```

When the end user runs the program from the previous page, the end user receives the expected results below. This time the end user runs the program with entering a wrong password and the program has responded wrong password but given the rights for Root user privileges.

Example above is a very strange situation where by even with wrong password the program has given Root privileges. The logic behind this situation is the end user has supplied the input length greater than the buffer size and the buffer overflow took place over writing the memory of pass integer value. Therefore pass integer value has non-zero value which fulfills the condition to grant Root privileges.

WIRESHARK AND ETHEREAL

Most of us would have heard of this term called Sniffing or Packet Sniffer. When someone is sniffing the network, he or she is basically analyzing all the packet movements in the network. Wireshark and Ethereal are well known packet analyzer software tools. Overall Wireshark and Ethereal performs and provide information as below:

- 1) Troubleshooting network issues and locating bottlenecks
- 2) Network intrusion detection

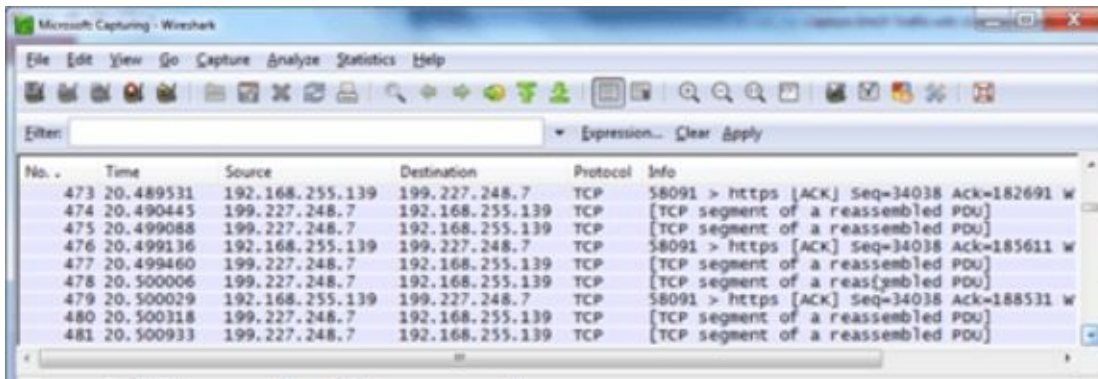
- 3) Log network traffic for forensic analysis
- 4) Discovering a DoS (denial-of-service) attack

A hacker will use the tools to exploit for the below information

- 1) Capturing usernames and passwords
- 2) OS fingerprinting
- 3) Capturing sensitive or proprietary information
- 4) Network mapping

STEPS TO FILTER DHCP TRAFFIC WITH WIRESHARK

Wireshark can be downloaded at <https://www.wireshark.org>. Below is a screenshot of wireshark capturing all the packets in the in network.



Conclusion

With the all the basic knowledge given in the book you will be able to accomplish any computer hacking process. As a novice, and you are much interested in getting started with computer hacking but haven't found a good resource to attain the required knowledge, follow all the illustration that you have read in this book.

Any computer hacking experts have a firm grasp on development, database layout, data extraction, how network traffic works, and much more. This book will teach you the theory, tools, and techniques behind some of the most damaging computer and web attacks present in modern web applications.

You will gain not only knowledge and skill but also confidence to transition to even more complex computer hacking in the future.

LINUX



**A Step-by-Step Guide To Learning Linux In Less
Than 24 Hours**

J A M E S C L A R K

LINUX

A Step-by-Step Guide To Learning Linux In Less Than 24 Hours



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Introduction

LINUX is a word coined from Linus Torvalds and UNIX. When Linus Torvalds wrote a college thesis on a UNIX operating system variant that would run on home PCs, it started an avalanche in the OpenSource community which continues to make tremendous strides. The Windows VS Linux debate continues, and Linux is making great headway.

Linux is designed around the core unit which is known as the Linux Kernel and is free, and from it, the OpenSource community builds 'distributions' which are designed for specific needs, and are only released after extensive testing. Windows come out with a version at their discretion, and instead of fixing the problems, they just release a new version with more features. You pay money for Windows.

Windows has daily updates for security leaks or upgrades, and continuing to work with them is not that easy. Linux also monitors your system update needs and allows you to select automatic updates, else the icon will flash in the task bar. Linux updates seem to take less time to complete, and seldom require a reboot, while Windows can take days to install.

Product drivers have always been a big issue with Linux because MicroSoft got there first with the manufacturers and held many proprietary rights. Most printers and other devices come with either Windows or Mac drivers, and more companies are beginning to include Linux drivers. Each distribution and version upgrade of Linux continues to provide new, if not improved, drivers for your devices.

If security is what you want, Linux is the operating system for you. Windows is notorious for security leaks, but Linux comes with all of the ports closed so that nothing is standing open for hackers to get in. Those ports only open on Linux when you start a program or service that needs a port, and then it close that port when you close the program.

There is an abundance of software for Windows, some of it is good, and others are a waste. Linux has kept up with the demands of both office and multimedia. The OpenSource community developed alternatives to Windows Office. Novell is funding OpenSuSE Linux and uses OpenOffice for their Cloud Nine computing service. OpenOffice handles all Windows documents with ease.

It may be easier to install Linux than Windows, but they both have a GUI interface to help the user. Linux simply moves Windows over to a separate partition and then installs Linux beside it.

You can not run both at the same time, but OpenSource projects like WINE allow you to create a virtual box where you can install Windows and run all that software from there.

Since 1990, Linux has come a long way in the OpenSource community where programmers are determined to provide a better way. There is constant improvement and additions to handle all your needs from office documents to multimedia.

The debate between Windows VS Linux will probably continue, but is becoming a smaller argument as more industries are turning to Linux for greater security and uptime dependability.

Chapter 1 – Top 5 Reasons to Learn Linux

As an open source operating system that is completely free, Linux is extremely attractive and demanded by the IT industries. Linux training is the only way for you to shine out from the rest of the crowd if you are contemplating a career in the information technology sector.

Since all of its upgrades and new versions are free, Linux is here to stay, and so is the demand for a decent authentic Linux training.

Here are top five reasons why you should consider taking up a Linux course to enhance your career.

- Learning Linux helps you bag your dream job and get worthwhile promotions: The main purpose of undertaking any training or professional courses is to either get a good job or to rank higher in the professional sphere.

Learning Linux will guarantee you a nothing less than a great job as well as ensure you get all the promotions that you possibly can since Linux is highly demanded but effective Linux trained candidates is pretty rare.

- Linux has a varied application: Once you are an expert in Linux commands, you will learn how useful Linux is and why the technology companies are so fond of it. Here are a few things that you can do with your Linux admin training.

- * Control users and their environments
- * Manage processes effectively
- * Use package managers to manage software
- * Install as well as effectively layout the file system
- * Manage disks and file systems

- Linux is highly customizable: Linux is an open source operating system, and that means all other major open source projects are built on it. Google's Android operating system, as well as new versions of Windows servers, are some examples of open sources built from Linux.

Thus Linux is flexible and can be customized just as little or as much as you want to. Certified Linux training courses are required to be versed with Linux.

- Linux is community driven and completely free: Neither does Linux nor do its upgraded versions cost you a penny. The Linux community can help you learn, and no upgrades fee will be asked of for the operating system.

Further, you can start up an internet based business yourself with a very minimum capital but highly valuable Linux training

- Linux courses cost almost nothing: Most of the Linux courses online are either free or charge a very low course fee for certified Linux admin training. You may have to pay for the advanced courses but considering its outcome, the fee is almost nothing.

Red Hat, The Virtual Training Company, IBM, and Linux Foundation to name a few are the online schools offering training on Linux admin.

Chapter 2 – Why Fedora used by Red Hat Linux

Fedora is a Red Hat Linux code based OS that provides users latest free and open source software. It provides this software in a stable, easily manageable and secure form. It is one of the software created by the Fedora project funded by Red Hat Linux.

Online Linux training invariably includes Fedora as a part of the curriculum. Why is it so?

Fedora focuses on innovation, integration of new technologies and works with many Linux developing communities. Being freely distributed with updates every six months it is the most evolving OS in the Linux community. Continuous upgrade means it is loaded with the newest technologies which make it the best technology for experimentation.

This is the reason it is a part of beginner Linux and rhce training as well. The cutting edge technology which is stable is the USP of Fedora and the reason behind it being part of Red Hat Linux basics.

Is Fedora being used as a test platform for Red Hat Linux?

Red Hat Linux community is promoting Fedora for the development of new technology is indeed true. However, it is not true that it is only Red Hat Linux that uses and contributes to the development of Fedora.

There are many other contributors and just like some technology of Fedora is being used by the Red Hat Linux Enterprise, other distributors are also using it. Another thing is that Fedora though is upgraded every 6 months is a very stable and pre-tested software. So it is quite safe to use Fedora to learn new things. This is why it is being used by most online Linux training as a part of Linux introduction for beginners.

Red Hat Linux Enterprise and Fedora relationship

Red Hat Linux Enterprise and Fedora project have a relationship which is mutually beneficial for both. It ensures rapid innovation for Red Hat Linux and Fedora gets the sponsorship and feedback on issues with the new technologies.

When the new tested technology migrates to Red Hat Linux, it is available to a broader community which makes the technology robust for users. So Fedora is the incubator for latest technologies and innovation in Linux.

In fact, Red Hat Linux always tries to make Fedora rich with features which make handling computers much easier. Various features of Fedora like Network Manager and Pulse Audio make it an enjoyable experience with the option of experimentation.

After all, Linux is open source which benefits from the feedback from its users and developers community. This is the reason for Fedora being part of Linux essentials and rhcsa training.

Ubuntu and Fedora

Now let us discuss the question of choice of Linux Operating system. Ubuntu is the most popular and user friendly while Fedora is loaded with the latest technology. So which one to choose?

Well it depends on the use. If the user is just using the computer for office jobs which does not include programming then Ubuntu is of course the better deal.

However with latest technology and regular development Fedora scores over Ubuntu in benchmarking tests. So it largely depends on the use of the software. If the question is to migrate from Windows Ubuntu is the obvious choice and if you are a serious programming nerd then Fedora is the best bet.

Linux Foundation recommends learning both Ubuntu and Fedora for a complete experience of Linux.

Chapter 3 – Get Benefited With Linux Dedicated Server

The primary purposes for this demand is the name that has been achieved by the Linux operating system. Now, let us find how this operating system has become the top most among dedicated systems:

Better control: The best thing about this alternative is that it provides better control to the users as compared to other alternatives available in the market.

The server is offered with many applications that can be used free of cost to access the source code. Also, installation of additional applications is also possible. Manual installation of applications is needed as it provides the facility of automatic application installation.

Better security: Users are saying that Linux provides better security as compared to Windows dedicated server. The reason is that as it uses open source technology, where others can view the code written by the programmer, he will be highly careful about making mistakes. Furthermore, attacks on systems are not done through the source code and so it can provide better security to the users.

Chapter 4 – The Right Way to Select A Linux Web Hosting

It is extremely common nowadays that a person includes an internet site. It may be a small business enterprise website, a hobby blog or perhaps a forum. Though, diverse web sites get the different thing; each internet site has one common will need, an internet hosting provider.

Web hosting could be the podium on which the internet site is positioned so that it could be visible to the total globe through World Wide Web.

In making positive that your website resides with suitable website hosting service, you will find several points which can be had to be looked at. The initial point you'll need to pick is the hosting server kind. Website hosting server would be the computers and they also need working a good operating system to take care of applications and services.

Probably the most extensively employed operating system is Linux. Linux system is extremely well-known simply because it's tested to become a secure, applications as well as the efficient operating system. Any time is picking the Linux system web hosting package you'll need to take into account many points.

One of all crucial points you need to think is info back-up. Files recovery and information backup are really crucial to the web site. Who knows, anything at all might happen at any time, so you need a backup of your web sites time to time. Thus make sure that the web Hosting provider gives you backup at least one time in a week.

You might have to consider concerning limitless bandwidth and space given by your internet hosting business. Even though an individual does not require a lot of data transfer or web space, getting limitless data transfer along with web space may assure that you've adequate room in order to include any kind of technologies.

You are able also to host data transfer programs and don't concern yourself with extreme uninformed caps. An excellent Linux hosting will give you unlimited web space and consequently

you will be capable of location anything you desire on your web server.

It is very crucial to recognize your essentials and to get a Linux web hosting by having a helpful choice of characteristics. Just about any great Linux hosting giver gives numerous useful features.

Most typical software formation utilized for Linux hosting is usually referred to as LAMP structure, which positions for Linux, Apache, MySQL, PHP, and also Linux respectively.

This is the most generally used combination of application to sustain the expansion of powerful web sites.

The majority of Linux web hosting businesses give one click installation software totally free for content management systems like Drupal, Joomla, WordPress, vBulletin, phpBB, etc.

Registering with any Linux web hosting organization consumes software for profitable management of the web site.

And last and not the least, make confident the service provider give just about all basic features just like firewall, virus protection, servers load balance, safety and so on anytime pick Linux hosting providers.

You will also find some extra features offered like extra FTP creation, MYSQL database, add-on domains, Sub domains solutions and several other services.

Chapter 5 – Linux Reseller Web Hosting: It's Numerous Positive Aspects

Two main reseller hosting organizations that rule the industry, as we say, will be Linux reseller web hosting and Windows reseller. Each has their signal good and bad points. Therefore, think cautiously before selecting your choice of reseller hosting package.

Your choice of reseller web host might provide you with a choice to upload documents on whether Linux system or perhaps Windows server. This option may be provided to you determined by your individual needs since both platforms are superb in overall performance.

Linux offers a number of advantages to making use of its software to the server system such as:

It can be an open source technological innovation, which is its key advantage throughout its opponents. Consequently you, as a client, do not pay any extra licensing charges to get the software.

Thus, by choosing Linux reseller hosting programs, it is possible to obtain the server system easily and also use it free of charge on any server. Besides, clients keep contributing to the code and also bring about enhancing the computer software over a steady basis.

This is additionally a big benefit the Linux reseller web hosting plans have more than expensive server software program plans.

Should you aren't pleased with Linux reseller hosting computer software and desire to convert to Windows, this platform offers you this capability. It is essential to publish your current documents to your Windows site, effortlessly and seamlessly.

Whatsmore, the site is scalable enough to get altered to match your changing needs. This helps it be the ideal alternative for developing online organizations.

Due to the fact the Linux reseller hosting choice is totally free and an open source technological innovation, it can be extremely cost effective. The only fee a user will need to pay is for

distribution that is laid down by the owner or the provider. However, this is a little expense and could be paid for by any consumer.

Customers will discover that Linux system is a lot more appropriate in its different scripting languages when compared with any other platform. It's numerous languages for example Perl, MySQL, and PHP. Linux can supply these languages if a specific site wants them.

Not simply is a compatibility of this reseller hosting program dependable, but it is also very successful.

Being a Linux reseller web hosting client, you'll also have the advantage of utilizing some kinds of databases such as MySQL, mSQL, and PostgreSQL. They may be successfully used to communicate effectively with any site for speedy information access.

This kind of databases is created in a relational manner to ensure that they perform effectively jointly to obtain the finest out of their overall performance when working with every other and the site.

The Linux reseller hosting choice offers far greater stability and also protection to its buyers in comparison with any other competing server programs.

Being open source software, it's stabler when compared with others, and it has, as a result, become a server system of option for professionals throughout the world.

Chapter 6 – Importance of Linux Cloud Hosting Servers

Are you searching Linux Cloud Hosting Servers then it is the better appropriate solution if you wish to get your web site or perhaps e-commerce website to get more efficient and also ensure excellent overall performance?

Linux Cloud Hosting Servers affords the clients with additional reconfigurability and also modifications can also be done according to their particular qualification. This hard drive server provided for you enhances your sites overall performance plus delivers a lot more management on the processing assets offered.

Linux server software makes use of the most recent technological know-how that allows every person to successfully work their very own type involving Linux and also delivering these using superior overall performance, tougher reconfigurability and also superior supply routes.

100 % Uptime is a confirmed this means your blog will be working successfully continuously with virtually no lagging. Regarding making certain your blog is usually about back-up server Auto-failover function is present.

Regarding ensuring utmost stability state-of-the-art, DDOS Safety is provided with Linux server web hosting service. Geographically repetitive DNS and also clientele are forwarded to 8 transit companies.

Linux Shared Web Hosting sustains the most recent and reliable web hosting variations similar to Fedora 7, CentOS 7, Ubuntu 14.04 LTS and also Debian 7.8. The two server and also PC features involving OS are provided towards the clients. These pre-installed hosts are instantaneously deployed which allows clients to work with these in their particular web hosting service offer.

Committed help workers are present that can present specialized alternatives if you're facing any problem together with your web site. Any common and also wide understanding bottom can be

provided towards the clientele to guide these using easy requests.

Customers are provided using personal hard drives that have identical creating to order as being a physical server. Linux web hosting service software allows your hosts to plug towards the web by using gigabit uplinks involving Internap's carrier.

Newest section variations are supplied so that clients might have entire management. Internap's

The standard VPS web hosting service is now no more some preferred choice because the carrier's networks slice up the specific hosts for them to easily share these relating to the clientele.

VPS companies employ container technological know-how to segregate this numerous end user on a single discussed Linux type which usually reduces this operation and also productivity.

Chapter 7 – Benefits of Linux on PS3

For those people that know quite a lot about software development, they are most likely to know that there is almost a constant battle between open source and proprietary software development. It is interesting therefore to note that there is now talk about a Linux PS3.

It is a well-known fact that the Sony PS3 is seen as one of the best gaming devices that is currently available on the market.

If you do decide to get a Linux one, then all you have to do is load the operating system on the hard drive of the gaming device. This means that you could get a whole new array of games.

You are not going to find that it 's hard to put Linux on the PS3. All it requires is that this is installed onto the hard drive. This will ensure that you can have any open source games that you would like.

If you are worried about the nature of open source games, then this is not something that should concern you. Because you will find that there are a lot of standards and that there is a high level of quality when it comes to the development of these games.

So this means that you will be getting a great quality game.

What you will have to make sure of, though, is that you have a professional available when it comes to the installation of the operating system on the hard drive. This means that you will ensure that you get the best service and of course the most favorable gaming experience.

Chapter 8 – Benefits of a Linux Storage Server

These days the very best thing to trust when selecting a server is a Linux Storage Server. Linux is the most effective operating system for all computers including servers.

These Servers are the best because they offer top security because it's very hard to infiltrate them, even for seasoned cyber criminals.

Whenever you work on the web, you want safety and the greatest method to have a safe business on the web is with Linux.

An additional great thing about Linux is its speed. Systems similar to Ubuntu Storage Server have shown to be the quickest within the industry. As you can see, selecting such servers will provide you with the newest speeds and security.

You increase your quality whenever you tackle speed and security which will mean much more customers for your company.

The Protection used by Linux Storage Server is unable to be cracked; it's even malware proof simply because the device is so well designed that files fail to access other parts of the PC or servers without permission from the system manager.

In the event, you work on the web you would like to have your files safely kept from any damage. You can only achieve that with a Linux Server.

You can have your server at home, or you can rent a server from another company. When choosing a company to provide hosting you should make sure that it has Linux Network Storage Server because only that way you can rest assured to have all your files safe from harm. The Linux modern systems are always being updated so that you don't need to worry about anything.

When you work with the internet, you want to be always able to deliver; that isn't easy when you have tacky systems running your files. Every time you rent a server on the internet make sure it has

Linux Storage Server or you can be under great risks.

Conclusion

Linux system is an os (OS), like Windows.

Think of there being two general kinds of software: os and "other."

The "other" program includes several kinds, including programs (like term processors, spreadsheets, and e-mail programs), utilities and servers.

And all of this runs "on top of" an os, such as Windows or Linux system.

Linux Commands Coaching Tips: The Linux system OS System Administration concepts, programs, and projects covered here apply to ALL other Linux system withdrawals, including Red Hat, Fedora, Ubuntu, Kubuntu, Edubuntu, Slackware, Debian, SUSE, and openSUSE.

Windows and Linux system Managing System (OS) Functionality

When you start a PC with an OS, it allows you to do projects like:

- ≡ run program programs, like a term processor, worksheet or e-mail program
- ≡ save information to your hard drive, like correspondence, memo or report
- ≡ retrieve data files so that you can edit them
- ≡ send your work off to print

Windows and Linux system Software Programs

In Windows, you can run lots of different program programs. The same is real for Linux system. There are a large number of customized and typical Linux system programs.

Linux system Coaching Tips: You can obtain several Linux system withdrawals (versions), such as a large number of programs and get them free! Then you can run the OS to get training, and as part of your training, you can watch video clips - to understand how to use Linux system the easy way!

The Windows Office Program and the Linux system OpenOffice Suit

Windows has a very well-known and typical collection of programs known as the Office Program. This suite includes several programs, such as a term processing system known as Word, a worksheet known as Excel and a demonstration system known as PowerPoint.

Linux also has a well-known and typical suite of programs known as OpenOffice. The phrase processor is known as Write; the worksheet is known as Calc, and the demonstration system is known as Impress.

You can obtain the 100 % free Linux system OpenOffice suite of programs and run these programs in Windows!

Using Windows and Linux system Desktop Computer Systems

On a Windows PC, you start to a desktop. From there, you use choices to select and run programs, and there are symbols you can double-click on to run programs.

The same is real of Linux system. You can also start to a Linux system desktop and use choices and symbols to run Linux system programs.

Linux system Coaching Tips:

There are several Linux system desktop computers to choose from, such as the GNOME and KDE desktop computers. Each one has the same performance (menus, symbols, and organization), but has a different "look and feel."

Linux video clips, podcasts (mp3 files) and ebooks are an excellent way to continue to understand. Just use these materials to understand a well-known Linux system concept or control being described - and then do the steps you've just seen - to work with Linux system yourself!

Linux program for PS3 can truly unleash the slumbering latent capabilities of your PS3 system. It is always forgotten by many that the PS3 is a very complex PC. Only using it for activity playing in regards to this fact almost seems as though a terrible waste.

The fact is that the potential of what your activity playing system can do, once realized, makes its use as only an activity title foundation alone seem quite laughable.

Using the Linux system program for PS3 opens up new doors of abilities for your system to be capable of. Once set up, your PS3 then evolves to a new state as a powerful Linux system driven processing machine.

More than that, due to the further ability to run the Windows-based PC as well, your activity playing foundation is now also a monster of a PC too. You would have essentially two formidable computers under your control, as well as one of the best activity playing techniques on the planet.

Think about that for a while and ponder the implications of just how much power that represents.

Now with your activity playing system, fortified by the power of the Linux system program for PS3, you can surf the 'net, and with the use of the emulator programs, you can obtain and play all of the games you wish from any and all activity playing platforms imaginable.

Downloading and watching movies and other multimedia data files are of course also at your control.

But what's more is that you can also obtain and run countless Windows and PC programs to truly boost your activity playing and processing experience beyond what you may have ever expected.

Installing Linux system on your PS3 can sometimes void your warranty and be damaging to your system!

Safety on the PC has become a very difficult problem. With malware and malware that either harm your PC or steal your information is a habit.

It's not out of the ordinary for the common customer connected to the internet to have more than a few problems with spyware and malware on their system.

Linux system program currently adds more protection for the common customer. Even if the Os were more well-known, it would still have more protection.

One of the claims is that Linux system is only protected because very few malware and malware are written for it. It is real that there are only a few malware and editions of malware for Linux system. Even if there were tons like on Windows, Linux system still has the advantage.

First of all, there is administrative protection. For anything to be set up to the system, a protection password must be typed in. It would take the end customer to purposely type in a protection password to set up this type of harmful program.

If no one knows this protection password, no one from the outside will be able to set up anything with the system automatically making it harder to set up the harmful program.

What if the end customer isn't aware and still installs this?

There is a deal management system that most withdrawals do that would address this problem. There are real humans who package the program. This means they test the program and see if there are any problems with it.

If it works, doesn't have bugs, and is totally exempt from malware or malware, the program is put out for you to obtain. If you only obtain these individually reviewed program for your distribution, you won't ever run into malware and virus problems.

This doesn't mean there could never be problems, but at the time being it's a very protected system to be using.

Google

Drive

Beginner's Crash Course To
Google Drive



JACOB SIMMONS

Google Drive

Beginner's Crash Course To Google Drive

(Docs, Excel, Cloud, Picture and Video Storage)

by Jacob Simmons

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Introduction

Google Drive and its associated apps represent perhaps the purest and fullest representation of the promise of cloud computing on the market today. With apps for word processing, spread sheets, photo storage, editing, slideshows and more, Google Apps provides users with the opportunity work on any number of projects, all without having to save a thing on your own hard drive and the ability share and collaborate on your work with team members around the world.

In this guide, we'll be giving you an overview of Drive and all the different apps that connect with it. We'll be walking you through the different features of the apps and what they can be used for, as well as offering some tips for going just a bit beyond the basics.

Chapter 1 – Google Drive

Drive itself is Google's entry into the cloud storage realm. Offering up to 15GB of free storage, Drive is a simple, low cost way to share your files in a way that is simple and intuitive for you and your team members to use. Compared to its closest competitors, Dropbox (2GB free), OneDrive (5GB free) and iCloud (5GB free), Drive offers considerably more storage in a simpler, more useful interface.

The comparatively greater usability is due largely to the fact that there are so many other Google Apps that can be used in conjunction with it. Having apps like Docs, Sheets, and Forms makes integrating your work with Drive a simple matter.

Combined with the fact that Google is also the originator of the Android operating system and that Google has put forth the effort to ensure that its apps are compatible with the ubiquitous MS Office, means that Drive can be used easily on your mobile device or PC without having to do any file conversions on the fly. Dropbox by contrast is strictly a cloud storage app, with no other applications that work directly with it.

iCloud works well with Apple's suite of apps but has the disadvantage of being tied too heavily to them, meaning that sharing files may be more difficult in general and it may also be difficult to access those files without converting them into a different, more accessible format. Add in the fact that Apple's products tend to cost a bit more and Cupertino is at a distinct disadvantage.

But enough of these comparisons. You aren't here to be sold a free product, you're here to learn how to use it. So let's start talking about some of Drive's specific features and how to use them.

Getting There

If you use Google's Chrome browser, then getting to Drive is easy. Just open up the small multi-colored box near the top-left of the browser window. Select Google Drive (a three colored triangle) and the program will open up.

If you are using another browser, such as Microsoft's Edge, then you will need to go to www.google.com and click on the grid pattern towards the right edge of the browser. From there,

simply select the Drive icon and you will be ready to get started.

A third option is to download the app for your computer. You will need to do this directly from Google as the app is not in the Microsoft Store. Once you have downloaded the app from Google, there will be a shortcut on your desktop that allows you to open the Drive like a regular folder on your hard drive.

From there you will be able to drag and drop files in and out as you wish. Those files automatically sync with your drive, giving you instant accessibility on any device.

Now that we know how to get to the Drive in the first place, let's start taking a look at how to navigate through the app.

Top Toolbar

Search – When you open the app in your browser you will find that there is a handy search bar at the top, just under your bookmarks bar. This is really self-explanatory as it simply allows you to quickly search your drive. Search is especially useful if you are looking for an old file or if you are just generally bad at organizing your them.

Apps – Next to that is Google's standard grid pattern that allows you to quickly switch to other apps in the Google stable.

Notifications – Google's standard alarm bell notification icon is also present, letting you know who has seen, shared, or edited the projects you are collaborating on, as well as all of your other Google Plus notifications.

Profile – This is simply Google's standard profile button with access to your settings and the ability to open up other accounts.

New – This button allows you to upload a file, create a new folder, or create new documents and perform a number of other activities. You can also open several other Google Apps from this button. When clicking on the desired app, it will open in a new browser tab and your work will automatically save to your drive.

Apps that can be opened include:

- Docs
- Sheets

- Slides
- Maps
- Forms
- Drawings

Other apps can also be connected to your Drive. By clicking on the “Connect more apps” option in the dropdown, you can add third party photo editors, zip extractors and more.

My Drive – This button performs many of the same functions as the New button.

View – This button simply allows you to toggle between ‘List’ and ‘Grid’ view.

Details – The little ‘I’ in the grayed out circle allows you to decide whether or not to show simple details on your projects such as the project owner and last date it was modified. The other view shows activity in the Drive such as uploads and when things are moved to the trash.

Settings – The standard gear icon opens up general information about the app, certain viewing options and more. You can also manage how notifications are handled and what apps are connected.

Left Sidebar

Here, you can navigate to your Drive contents, files shared with you, and go through recent, starred and trashed projects.

Storage can also be upgraded, allowing you to choose between the various paid plans that Google offers. \$2 a month will get you a 100GB of storage and \$10 a month will grant you 1TB of storage, which should be enough for nearly anyone.

The sidebar also allows access to any photos that you added to the Google Photos app. We’ll discuss later how you place the images directly into Photos from Drive. Either way, it can take a minute or two to sync.

Finally, if you have not already done so, there is a link in the bottom left of your window that will allow you to go to the page so you can download Drive for your PC.

Center Viewing Area

There isn't an awful lot to discuss here. In the middle of your screen is a list of the different files, folders, and other projects that you have uploaded to your Drive. Remember, you can switch between a list and grid view using the toggle in the toolbar.

When you click on your project though, this section does get more interesting. When you do so, a number of other options show up in the toolbar. Options included are:

- Shareable Link – This provides a link to the project you want to share via email.
- Share – The Google Plus icon allows you to share your project directly with anyone via the social network.
- Preview – Does exactly what it says.
- Remove – A little trash icon that is pretty self-explanatory.
- More options – The standard three dot “wait, there’s more” icon provides other actions such as opening the project with another app, renaming it, moving it, or downloading it to your hard drive.

Right clicking on your project will also bring up all of these same options in a single dropdown menu.

Right Sidebar

On the right you will see a space dedicated to showing you a slightly larger thumbnail of your project than you see in grid view and a host of standard information about the project such as the file size, location and when it was last modified. You can also add a more detailed description if you wish.

Now that we have thoroughly gone through Google Drive, let's move onto another Google App, one we have already briefly touched on, namely Photos.

Tips

If you are looking for a needle in your haystack of image files, and can't remember when it was taken or what you might have named it, there is help for you. Type a simple description of the image into the search box and all of your related files should come up. You may still have a lot to search through, but at least it will be narrowed down.

If Drive is installed on your phone, you can take a picture of any document and it will be stored as a PDF file.

Chapter 2 – Google Photos

Google's cloud based photo storage app looks simple when you first open it. To do that, go to the grid that I mentioned in the Drive discussion and click on the weird looking, rainbow throwing star thing that Google for some reason chose to represent its Photo app.

That will open it directly in your browser. If you are a first time user and have not uploaded anything to your Drive or Photo app before, then what you will see is mostly just white space. But there are few buttons that reveal quickly that the bland appearance of the app is quite deceiving. As before, we'll start at the top and work our way down.

Main Menu

The three little lines to left of where "Photos" appears on screen opens up the main menu which will serve as our window into the app as a whole.

- Assistant – The first item in the menu opens up a collection of wizards that will help you create and share albums, collages and even animations out of the photos and other images that you have uploaded to the cloud.
- Photos – This simply allows you to see all of your photos and videos.
- Albums – Albums will allow a user to browse and sort images and videos, with already created albums including Shared, People, Places, Things, Videos, Collages, Animations, and Movies.
- Shared – Takes you directly to all of your shared content.
- Trash – Again, self-explanatory.
- Settings – The settings menu has many features that you will likely want to explore. The first lets you choose what quality you want the app to store your images in. If you choose 'Original,' the storage space will count against your free 15GB of space that comes with

your Google account. However, if you choose ‘High Quality’ the storage space for your images is unlimited. There are other features that can be toggled on and off such as:

- ≡ Group Similar Faces – Automatically arranges photos with the same people into separate folders.
 - ≡ Google Drive – Links the videos and photos uploaded to Drive with the Photos app.
 - ≡ Remove Geolocation – This removes any information stored in the photo regarding where you were when it was taken.
 - ≡ Activity log – This lets you see and get rid of any inappropriate comments from any shared photos.
- Send Feedback – Allows the user to send detailed feedback about problems with the app, including a screenshot so you don’t have to worry about copying down a complicated error code.
 - Help – Opens up a searchable Help menu full of useful ‘How To’ articles.
 - App Downloads – Last in the main menu is a link to download Google’s uploader to its photo storage vault.

You will also find the Assistant, Photos and Albums buttons on the left side of the window. The dots below that also open up the main menu.

Top Toolbar

Again, along the top of the window is a toolbar that comes with a search bar, a create button and also a button to create new albums and such as well as a way to upload new files.

Chapter 3 – Google Docs

The apps icon also allows you to go straight to Google Docs. This cloud based app makes it easy to create, share, and edit new documents such as stories, scripts and amore. There are also templates for things like resumes, reports and project proposals.

The opening page gives you access to all of these templates, as well as thumbnails of all the documents that you have created or have been shared with you. Options are available to display only those owned by yourself, buy others, or all, as well as whether to show them in list or grid view.

They can also be arranged by the person who modified them and when. Finally, if you have a number of folders, you can click on the folder icon to browse the folders and open up the file of your choice.

Clicking on ‘Blank’ opens up a blank page and toolbar that is very similar to the one you would find in Microsoft Word.

In the toolbar you will find standard options to adjust the font size and style, add text effects like underlining and highlighting, adjusting spacing and text alignment and formatting. There is even an editing tool that will make it easy for your collaborators to see any changes that you may have made.

Clicking on the dropdown arrows all the way to the right brings up a number of other dropdown menus:

- File – Standard options like creating a new document or opening an existing one. There are also options to print, change the language, and download or rename the document.
- Edit – Again, standard options like cut, paste, undo, redo.
- View – Simple options like the default view, ruler, equations and spelling suggestions.
- Insert – This dropdown allows you to insert equations, images, links, charts, drawings,

tables, footnotes, special characters and more. This is also where you go to insert page breaks, page headers and footers as well as creating a table of contents for your document.

- **Format** – Options that duplicate the settings in the default toolbar. There are also simple photo editing options like image cropping.
- **Tools** – Here you will find spell check, word count, voice to text, a dictionary and more.
- **Table** – All the options you need to insert and build a table.
- **Add-ons** – This gives you a link to several third party extensions for calculators, different font designs and even music notation.
- **Help** – Simple ways to report issues and find keyboard shortcuts.
- **Comments** – This isn't a dropdown but rather a button that allows you to view any comments on the document and displays any relevant notifications.
- **Share** – Button that allows you to share while preventing others from sharing the document.

Tips

By using the 'Share Screen' feature in Hangouts, you can share any open window with collaborators around the world.

Using the 'Research' option in the Tools dropdown and the Scholar Filter, you can search for quotes or citations to support your work.

Chapter 4 – Google Sheets

Sheets, Google's answer to Microsoft's Excel spreadsheet program boasts an interface on its main page that is very similar to Docs. Just as with the word processing program, Sheets displays any existing spreadsheets that have been created and/or shared as well as multiple templates that you can choose from.

These templates are divided into in 'Personal,' 'Work,' and 'Education' groups and include everything from wedding planners and calendars to invoices and grade books. As before, we'll open up a blank spreadsheet and walk through some of the available features.

Upon opening the app, you will be greeted with the familiar grid view and full-featured toolbar and set of dropdown menus.

The options offered are similar to those in Docs with the exception that there are many more that of course are tailored to creating a spreadsheet. There are options to add and delete rows as well as various calculation tools that will help you manage and understand your personal and business data.

- File – Nothing new here.
- Edit – Standard options plus the ability to delete selected rows and columns.
- View – Allows for the views of formulas, grids and ranges.
- Insert – Ability to add new rows, columns, functions and other standard options such as images.
- Format – Standard options for formatting fonts and text.
- Data – This dropdown lets you sort your information and select and even create filters.
- Tools – Provides things like a script editor, form creation and a personal dictionary.
- Add-ons – Just as with Docs, this gives you a link to several third party apps.
- Help – Again, nothing new here.

Tips

By selecting a set of cells and/or columns Sheets will give the user instant summaries of data.

By clicking the 123 icon, and selecting More Formats and More Currencies you can convert your currencies into foreign units.

Chapter 5 – Google Slides

Just as Sheets is Google's answer to Excel, so Slides is Google's answer to PowerPoint. And as Google does so well, they have once again designed the interface to be very like that of Sheets and Docs.

The templates are also broken down into simple Education, Work, and Personal sections. They provide a good starting point for your photo album, case study, science fair project and much more. Once again, for anyone who has used PowerPoint, the interface will be very easy to get used to.

Top Toolbar

The quick access toolbar provides basic magnification and undo tools. There are also a number of other, much more interesting and useful options.

- Plus sign – This button allows you to add a slide and choose a layout from a dropdown menu at the same time.
- Text box – Insert a text box of any size.
- Insert image – This allows you to drag and drop images into place from your hard drive or Google Drive. It is also possible to add images via URL.
- Shapes – Functions to add in any geometric shape, arrows, speech bubbles, and mathematical symbols.
- Background – A popup window appears, allowing you to choose the background color image for each individual slide in your presentation.

- Layout – This dropdown allows you to choose where your main text boxes, headers and sidebars are located.
- Theme – If you are not interested in completely building your presentation from the ground up, you can simply choose a theme which will provide you with a default layout, color, and font so you can get to the important business of building your presentation before the deadline hits. Previews of the different themes are available in the sidebar to the right.
- Transitions – To help liven up your presentation Slides has a small selection of transition animations. There are not many to choose from but it does grant you the ability to apply a different transition to each slide or one to all. These also are selected on the right sidebar.

Dropdowns

Given that most of the dropdown menus have the same functions as other apps, we'll only focus on those that are more unique or relevant to Slides.

- Insert – In addition to the options provided for in the quick access toolbar, the insert menu also makes it easy to add in videos, links, charts and animations.
- Slide – In addition to adding or copying a slide, this menu provides the ability to change backgrounds and themes.
- Format – Provides options to crop images, and change the fill color of your slide.
- Arrange – Allows you to move your images, text boxes, etc around on your slide for maximum customizability.

Work Areas

The left sidebar allows you to scroll through thumbnails of all of your slides, making it a simple matter to find that one slide you think needs a little extra work. You can also add slides with the Plus button just above it in the toolbar or use your mouse to rearrange the slides as you see fit.

Right clicking on the thumbnails allows you to quickly cut, paste or add a slide. From here you can even change the theme, background or transitions.

The primary work area in the middle of the screen is of course where you will get most of your work done. You can rearrange the various text boxes, drag and drop images and resize them, all with your mouse, stylus or finger, depending on what device you are working on. Below your slide is also a space to add notes to help the presenter go beyond a few simple bullet points.

The left sidebar only appears when you are working with certain features such as transitions and themes as previously discussed.

Tips

Slides actually has a built in laser pointer. Clicking the Present button, you will find the Laser Pointer option which turns your mouse cursor into a red dot like a laser pointer.

By going to Presenter View and Audience Tools you can set up a question and answer mode that encourages audience participation.

Chapter 6 – Google Forms

Google Forms allows a user to quickly and easily create quizzes, worksheets, signup forms, invitations and more. As the interface duplicates that of the other apps already discussed, we'll jump straight into understanding the basic format of the blank form and discussing the various tools and features that will help you to create a fully customized form. As before, we'll start at the top and work our way down.

Color Palette

There, you will find something that looks like an artist palette. Clicking on this will allow you to change the base color of the top of the form. The Palette doesn't have kind of subtlety that you might expect if you are used to MS Office but it's adequate for most situations.

You can also add images either from a number of pre-loaded themes, upload one from your hard drive or from your Google Drive albums.

The one thing to keep in mind is that images that can be added need to be between 800x200 and 2500x2500 pixels in size to be able to fit within the document header.

Email

The paper plane icon opens up a pop-up with options to send a form via email, a shared link or you can share it via Google Plus, Facebook or Twitter.

But Wait, There's More!

Those suggestive three little dots as usual contain many more options to help you quickly create and edit your forms.

Most of these options are standard. Things like Preview, Trash, Copy, and Print are available. There is also a link to allow users to report problems with the app.

The Settings menu is the most interesting here as it is possible to require others to sign in before opening the form and whether they can edit the form or read only. It is also possible to display a progress bar, alter the question order, show other links, and create your customized message that gets sent out when the completed form is submitted.

If you are creating a quiz, then settings are available that allow the person taking it to see her grade, missed questions, answers she got right and the point value associated with each question.

Main Work Area

This area is where you of course go about building your form. It is divided into two primary sections, Questions and Responses.

Questions

Here you can title and type out a general description of your form. Below that, you can begin adding questions. Using the dropdown on the right you can choose what form you want answers to be given in. Options include multiple choice, paragraph and checkboxes.

Images can also be dropped in to go with your questions.

Responses

This section allows you to track individual responses to your form, determine where you want them sent, set email notifications, or send them to a spreadsheet so that you can track and analyze them.

Bottom Toolbar

Unlike the other apps discussed there is a quick access toolbar located at the bottom of your screen.

In order, these buttons allow the user to:

- Add a question

- Add a title and description
- Add an image
- Add a video
- Add a new section to your form.

Tips

Need more responses? Don't actually feel like spamming the people in your contacts list? Then take your form, go to File then Embed and then copy and paste the HTML into your website.

If you are collecting data over a period of time, you may find the ability for responders to edit their responses useful. Just click the option at the bottom of the screen when you create a new form.

Chapter 7 – Google Drawings

Unlike the above apps, this does not have a set of templates to choose from. In fact, of all the rest of the Google Apps discussed so far, this one seems the most under developed app in the Google stable. There is simply a blank work area into which can be inserted shapes, text boxes and images of various kinds.

There is also a great deal of flexibility when it comes to adding and manipulating text. However, there is no free form drawing function in the app, making the name of “Drawings” seem rather nonsensical. However, Google never leaves anything alone, so be sure to keep an eye on the app to see how it develops.

Chapter 8 – Google MyMaps

At a glance, this app looks to make up for the relative disappointment that is Drawings. It opens up to a world map that you can use to plan routes, add markers and more. Naturally, though, you are not likely to be travelling around the world (though you might).

And even if you are, you will want to get a little bit closer than a view from orbit in order to plan your trip. Fortunately, this app lets you do that with relative ease.

Planning a trip.

Start by going to the search bar and type in a destination. Let's say part of your trip will include Toronto, Canada. Type that into the search bar and the map will center on the city. Since Toronto is a large city, the view is still fairly far out. You can zoom in though using the buttons on the bottom right of the window.

Doing this, you can zoom in far enough to see markers for individual businesses and small residential roads. This can come in particularly handy if you are trying to find places to stay or eat while visiting an unfamiliar area.

Navigation is simple as well. Once you have zoomed in, you can just move the map around with your mouse, noting all the streets and attractions you will want to go to. We'll continue down our hypothetical trip.

Say you want to stay at the Chelsea Hotel in Toronto, a hotel you discovered just by zooming in on the city. By clicking on the icon, basic information like address, phone number, website and average review score show up. If you click on the website, it will take you straight there so you can research nights available, amenities and rates.

A quick glance shows that if you want a decent cup of coffee there is a Starbucks just a few blocks down the road. And just one block down is Elmwood Spa to if you want to really take a day off. You will also see nearby restaurants and even a park, all within walking distance.

Naturally though, you will want to get out of the immediate area and see some other things in the

city. Let's just say that you are a hockey fan and part of the reason that you want to go to Toronto is to visit the Hockey Hall of Fame. Using the line drawing tool, you can draw out your route, setting checkpoints along the way.

You can type in directions for your route as well and if you want to have an idea of how far you will need to be travelling (if you are thinking of renting a bike instead of taking the Metro for example), you can trace your route with the ruler tool that will tell you how far the distance of each leg of your journey will be.

You can also add a title to your route and add an image to make it easy to remember what you were planning on doing on each day of your trip.

You then notice that there is a ferry terminal nearby that will take you out to some of the beautiful island parks just off the shore in Lake Ontario. The process can be repeated as many times as you like and you can even add different layers to the map so that you can plan each day individually.

And of course, since this is a Google app it is easy to share with others who might be joining you on your trip.

The only significant weakness in the app is the fact that there is no way to display directions in a text format, forcing a user to rely on the visual map.

A strength is that it is possible to change the basic format of the map, going from the default road map, to satellite, to topographical and more. Another great feature is that you can use the app to import important data from the internet or Google Earth.

There are of course other uses for MyMaps. They can be used to create virtual tours and also for educational purposes, such as showing the movement of different populations or researching concentrations of different industries, all at just a glance.

Chapter 9 – Other Apps

As previously stated, it is possible to connect a number of third party apps to your Google Drive.

Some of these are:

- DocHub – PDF editor
- MindMup – Mind map for brainstorming books and projects.
- Flat – Music composition
- WeVideo – Video Editor and Maker
- Pixlr Editor – Photo editor
- Drive Notepad – Simple note taking app
- Game Emulator with Google Drive – Emulator for SNES, NES, GameBoy and Sega Mega games. So you can relive your childhood during your breaks.
- GeoGebra Math – Graphing calculator
- PowToon – Presentations creation. Great for making educational YouTube videos.

There are literally dozens more to choose from. You are only limited by how much time you have to spend exploring the various options and determining which will work best for your needs.

Conclusion

Google Drive and its associated apps represent the best in modern cloud computing. With the ability to create, edit, store and share nearly any project, it is also one of the most versatile. From slideshows, to trip planning, to writing that report that needs to be on the boss' desk in two days, Google Apps does almost anything that anyone could need.

While there are a couple of weak points in the software that we have discussed, it is hard to be complain too much since Google provides Drive and the rest for free for most users.

Add in the fact that Google is always developing new tools and tweaking old ones, it is very easy to see why so many people have turned to Google for their cloud computing needs.

DAVID JONES

AFFILIATE MARKETING

THE ULTIMATE BEGINNERS GUIDE
TO BUILDING YOUR BUSINESS EMPIRE



Affiliate Marketing

The Ultimate Beginners Guide To Building Your Business Empire

by David Jones

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Introduction

What is affiliate marketing? Well, first of all, it's certainly nothing *new*. Affiliate marketing has been around since long before the internet — or even electricity — was invented. And it'll continue to be around long after the world as we know it has come to an end — modern luxuries and all.

As long as there are still people alive to chase after profit, affiliate marketing will always exist. It's just too good of a system to ever become outdated. It's 100% future-proof.

In simplest terms, affiliate marketing is when a business outsources their sales department. A great example of affiliate marketing in practice is the sales model of the Avon corporation. For decades Avon has offered industrious people the opportunity to launch their own business using Avon Products.

People simply enroll in Avon's commission program and earn a generous percentage of every Avon product that they sell.

The result of this system is a wonderful symbiotic relationship between business and individual. Avon is spared the meteoric expenses that come with having an in-house sales force on the payroll. The Avon representative gets access to an unlimited inventory of quality products.

There's no overheads or costly barriers to entry on the person's end. All they have to do is get other people to order Avon Products and collect their commission for doing so.

Affiliate marketing was a viable strategy even when it required selling the product door-to-door the old fashioned way. But now — with the advent of the Internet? Affiliate marketing is a more lucrative prospect than ever, for both parties involved.

With the Internet in the picture, every affiliate marketer has the potential to make unlimited sales around the clock. Once you've set up a web page that works, all you have to do is sit back and let the money come to you. Or better yet — move on to your next affiliate marketing venture and set up another stream of income.

The possibilities are limitless. The wealth you can accumulate has no cap. And the best part about it? The only chips that you ' re putting on the line as an affiliate marketer are your time and maybe a couple bucks here and there for a domain name and basic web page hosting. That ' s right: there are virtually no overheads in this business.

Hence, this book will focus on the application of affiliate marketing on the Internet. You should already know basic stuff like how to click a link, how to send an e-mail, and how to refrain from wasting hours per day watching cute cat videos on YouTube.

You might laugh at that last part, but I ' m being quite serious. I think that YouTube and social media sites have robbed the world of more great affiliate marketers than alcohol has robbed the world of great fathers.

Many people set out to make a living in this business, only to wind up screwing around on the Internet all day. For the most part, a strong sense of focus and restraint is all that separates the Olympian affiliate marketers from the kiddies splashing around in the pool.

If you get distracted easily anytime there ' s a mouse and keyboard in front of you, affiliate marketing ain ' t for you. Luckily, this guide begins with some great tips on how to make your internet browser into a virtual office where you get stuff done, rather than a distraction-filled playpen where you just waste time.

So on that note, enough chitter-chatter, let ' s jump into the world of knowledge — and then jump *out* and on into the world of applying that knowledge as quickly as possible. After all — as you ' ll soon learn — over-analyzation is the bane of the online affiliate marketer.

You can waste years of your life studying this stuff and never make a dime. The rich affiliate marketers are the ones who dive in head first and start swimming with a “ good enough ” working knowledge of the practice.

Chapter 1 – The Starting Line: How To Set Up Your Workspace For Affiliate Marketing Success

As an online affiliate marketer, your computer 's web browser is your starting line, your finish line, and the racecar carrying you between the two — all in one. So before we dive into the nitty gritty of collecting your commissions, let 's make sure that your racecar is fitted for success.

The internet has really changed the game when it comes to marketing. But not in the sense that it 's changed the age-old principles that all marketing tactics are based on. No, the Internet has just given us marketers the opportunity to put those principles into action like never before.

The widespread use of the Internet is good news for marketers, but it 's very bad news for anybody who 's trying to use the Internet as a tool to accomplish something.

Every time you open up a browser, you 're just one hop away from a million different things vying for your attention. Take YouTube, for example. Video seminars on YouTube can be a valuable source of knowledge for us affiliate marketers.

But from the second you step foot onto YouTube, the entire purpose of the site is to suck up as much of your time as possible. That means, if possible — and really, *at any cost* — distracting you from your original intent.

“ YouTube is directly incentivized to create as many video and ad clicks as possible. As a result we are inundated with tasty thumbnails and advertisements from every angle. While this is good for someone looking to kill time, it's not so good for those of us intending to focus on educational content, do research, or simply find some relaxing music to groove to. ”

That quote comes from the text of a Google Chrome (probably the best browser for affiliate marketing) add-on called “ Distraction Free YouTube. ” I highly recommend that you install it.

But it doesn 't end with YouTube, almost every site that you can think of is built with a similar model in mind. To the average consumer, almost every aspect of the Internet screams “ if you 're here to get work done, you 're in the wrong place my friend. ”

But we ' re not an *average consumer* any more, are we? No, now we ' re marketers.

One solution is to keep track of your idle time online with a productivity tracker browser add-on like Be Limitless. Along with a few useful features like a to-do list and notes, the main purpose of this extension is simply to collect hard data on your browsing habits. The idea is to make you look the hours you ' ve spent online in the face and, if necessary, shame you into no longer wasting time.

An alternative to this add-on that I also like is called Time Warp. With this extension, you can set up the amount of time you ' re allowed on your favorite useless websites per day before they ' re blocked. It also displays the amount of time that you ' ve spent on a " blacklisted " site in real time within a big glaring banner at the top of the page.

There are tons of Google Chrome add-ons for productivity like these two, and decking out your browser to make it an environment for success can be a fun and rewarding afternoon well-spent (okay, maybe I just have a bizarre definition of " fun, " but whatever).

Another option is to block your access to time-waster sites entirely with an external application like ColdTurkey.

This software allows you to blacklist sites for a given period of time as well as in accordance with a schedule. So if Facebook is always a looming temptation while you ' re working, you could set it up to be blocked during your working hours from 8 am to 5 pm, and still keep up with your feed outside that timeframe.

Again, there are a myriad of options if you want to go this route, but ColdTurkey is the one I prefer. You can download a free version at GetColdTurkey.com.

Finally, one more productivity-enhancer that I ' ve come to find essential is another Google Chrome add-on called " Mindfulness App. " This extension will simply play a pleasant chime sound at the interval you define (personally, I like to get my chime on every twenty minutes) throughout the day.

I use it as a way to check-in on myself and evaluate what I ' m up to. Whenever I hear that chime I immediately ask myself, “ Am I doing something productive right now? ”

...Or, is it possible that I got sucked up into the whirlwind of bologna vying for my attention on the Internet? If it ' s the latter then I snap out of the hypnotic “ consumption-state ” I ' ve drifted into, and get back to the task at hand. I don ' t know how many hours of wasted time this simple habit has saved me.

You see, your willpower is a finite resource. If you ' re constantly battling the temptation to “ take a break ” from what you ' re doing to check your social media, you ' re fighting a losing battle. So instead, enlist the help of the technology you ' re already using to pre-emptively eliminate these temptations for you.

After all, that premise — conscripting the computer to carry our load, an idea also known as *automatization* — is very much the heart of online affiliate marketing itself.

Chapter Recap:

- Adopt a “ producer ” , not *consumer* mindset towards the Internet in general
- Your web browser is your workspace — take advantage of the countless productivity extensions out there to optimize your workspace for success

Chapter 2 – Commission City: Choosing A Product Or Service To Promote

Now that we 've got a productive environment set up we can get down to business.

The first order of business is twofold: decide where your money 's coming from and how you 'll earn it. The latter is subject of chapter three. The former, we will cover right now.

Enter Commission City – Population: ???

Almost every product or service you can think of has an affiliate program in some fashion or another. For our purposes, however, there are a few major players that we 're going to be looking at:

Clickbank Products

Clickbank.com, the Internet 's “ premier digital retailer, ” is an enormously popular platform built entirely around the affiliate-commission business model.

Businesses, corporations, and even individuals with a digital product to sell (eBooks, software, video courses, etc.) can list their goods on the Clickbank marketplace.

Clickbank 's massive user base of affiliate marketers are free to promote the product of their choice. Affiliates receive a very generous percentage of every sale that they make — their “ commission ” — that varies from product-provider to product-provider (also known as “ vendors ” in Clickbank lingo).

What 's so great about Clickbank is that, really, the only thing you need to do to get paid as an affiliate is to drive “ traffic ” (AKA visitors, hits, views) toward the vendor 's site.

The bulk of the “ vendor 's ” job — in addition to supplying a worthwhile product that people will buy — is to take it from there and make the sale. It 's a bit like getting paid to bring

in “ leads ” to a business, although in this case you don ’ t get paid unless the lead gets converted to a sale.

That ’ s why it ’ s absolutely critical to pick a Clickbank product that you know is capable of selling. Clickbank has conveniently tracked this metric for you in the form of the “ gravity ” rating listed alongside every product in their affiliate marketplace. A good gravity rating means that the product is selling well.

Beware of gravity ratings that are *too* high, however. They mean that the product is good, but they also imply that the big dogs on Clickbank have “cornered the market” for that product. You’ll have a very hard time competing to sell a product that already has gravity in the “100” ballpark. Instead, it’s better to get on board with a product when it’s just starting to take off. That usually means a gravity rating in the 10-40 range. In that range, you know that the product isn’t a dud, but you also know that it isn’t so popular with other affiliates that the competition is insurmountable.

Amazon Products

If the prospect of selling digital goods turns you off, you ’ re in luck. Amazon.com also has an affiliate system in place. You can use their program to promote almost any product that ’ s listed in Amazon ’ s massive catalogue of goods. The commission rate, in this case, operates on the same sliding scale no matter what you ’ re selling:

- 4% of the product ’ s price per sale for the first six sales of that product
- 6% of the product ’ s price per sale for the seventh to 30th sales of that product
- 6.5% of the product ’ s price per sale for the 31st to 110th sales of that product
- 7% of the product ’ s price per sale for the 111th to 320th sales of that product

The commission rates continue to rise at similar intervals, capping out at 8.5% per sale of the product beyond the 3,131st sale.

Just like Clickbank, you get paid so long as a person sent to the Amazon page via your affiliate link makes the purchase. Unlike Clickbank, there ' s no persuasive video or finely-tuned sales copy waiting for the visitor to encourage the sale. Just the regular old Amazon page for whatever product you ' re promoting.

Hence, the strategy for Amazon affiliates tends to vary slightly. The most successful Amazon affiliates are bloggers and Youtubers who hype up the products to their audience beforehand.

Web Hosting and “ Local Affiliate ” Commissions

If you ' d like to promote a service instead of a product, web hosting is one such service well known for having strong affiliate commissions. Both DreamHost.com and HostGator.com offer a strong monetary reward every time someone signs up for one of their hosting plans through your affiliate link.

Many of the most successful web hosting affiliates operate locally. They reach out to small businesses in their area and offer to set them up with a website so long as they purchase hosting through their link.

This is an interesting hybridization of the global online business world with the local offline business world, and that creative blend is exactly the sort of out-of-the-box thinking that makes affiliate marketers rich.

Wherever you are, look around you. Can the idea of using the internet for “ lead generation ” be useful to any small businesses around you? Maybe you can strike up a deal with a local business owner to create your own “ affiliate program ” where one doesn ' t already exist. Take the initiative, and you ' ll be surprised what opportunities you find.

Chapter Recap:

- Find a product or service that suits you to promote – both Clickbank and Amazon ' s programs are safe bets, but they ' re also two largely different animals

- Look around you for local affiliate marketing or lead generation opportunities

Chapter 3 – Going For The Gold: Choosing Your Affiliate Marketing Method

As you 've hopefully gleaned from the previous chapter, the number one priority when it comes to affiliate marketing is traffic. Your goal, in a nutshell, is to drive as many clicks to your affiliate 's product through your link as possible.

Of course, your affiliate program will provide you with the proper identifier link that makes sure you get credit (and commission!) for your sales.

With that in hand, it 's time to decide upon a system for getting traffic. All affiliate methods really boil down to the same core principle: attract an audience, and pass them along to your sponsor.

To attract an audience online you have to be offering people something in return for people 's interest and attention. You have to provide them with some form of *content*. That content can be:

- Entertainment
- Information
- Entertaining information
- Informative entertainment
- Inspiration (AKA emotional entertainment)
- Motivation (AKA inspirational information)
- Content that entertains the user 's desire for useful information

...I think you get my point. Whatever you do, any worthwhile content that you can offer an audience online is pretty much going to fall into the sphere

of “ informative ” or “ entertaining, ” with various shades of the other in between.

Blogging and Vlogging Your Way To Affiliate Riches

Many of the most successful affiliate marketers are popular YouTubers or big names in the blogosphere. They create content that people enjoy for free, but they ’ re also able to leverage a consistent percentage of their audience into buying their affiliate offers.

These are people who ’ ve spent years cultivating a high degree of trust with their fan base, so when they drop an affiliate link with their endorsement you know they see the cash come rolling in.

In a time where competition is fierce for newbies to YouTube or the blogosphere, this avenue to affiliate riches can be a long one and difficult one. But it ’ s also, perhaps, the most stable as well as the most rewarding.

It ’ s important to know that, for any affiliate marketing method, you want to create content that ’ s relevant to a “ niche. ” A niche is a sub-market within the grander ecosystem of Internet business.

Some examples are gardening, make-up, or weight loss. The more specific your niche (“ weight loss *for women* ” vs. weight loss in general, for example) the less competition there will be and the more interested your target market will be in what you have to say.

Thus, you shouldn ’ t take a swing at affiliate marketing without having a good niche in mind. Don ’ t make a YouTube channel about your daily life or write a blog about your opinions and expect it to eventually make you money.

Unless you ’ re already a huge celebrity that people are dying to know more about, that probably won ’ t work. Instead, you would start a YouTube channel or blog whose content revolves around your niche of choice.

I ’ d say that this is the number one object of import when it comes to affiliate marketing: figuring out your niche.

Building An Authority Site To Bank Big

On the far end of the “ information-based content ” spectrum lies the authority website.

It ’ s been discovered that if you provide people with some useful information to help solve them solve a problem they ’ re having, they might just hop on over to your sponsor and pay for more.

Enter the authority website affiliate marketing model.

Don ’ t be fooled by the fancy moniker, an authority website is simply an informative website that search engines have deemed well-made and trustworthy. And when search-engines decide that your site is worth visiting, they have a way of moving traffic to your site.

From there, all you have to do is sit back and let your strategically placed affiliate links work their magic. You could even design and feature your own on-site banners for the products you ’ re promoting.

How do you get “ endorsed ” by traffic-drivers like Google and Bing? Well there ’ s a saying in the affiliate market world: content is king. That means that you get “ endorsed ” by providing reliable, up-to-date, and well written content on your site. Who would have thought?

Once again, it pays to niche down when you ’ re looking to build an authority site. To see why, Google what your competition would be if your idea for an authority site were to, say, revolve around helping someone with their acne problem.

You ’ ll find that the top search results are all very well established authority sites like WebMD.com, Acne.org, and Drugs.com. These sites may not be *directly* competing with you as affiliate marketers, but they ’ re still competing with you for hits.

Big sites like these are Google ’ s golden boys, and they aren ’ t likely to have their traffic displaced by some new kid on the block any time soon.

So instead of making a site for acne in general, you could make a site for a specific type of skin problem for a specific type of person. Maybe there ’ s a product on Clickbank that teaches worried parents how to prepare a diet for their baby that will quell her frequent rashes. That

might be a niche you have a chance of “ cracking. ”

You see, you have to get creative. You can ’ t do what someone else is already doing unless you know that you can do it better. You have to be both imaginative and specific if you want to succeed as an affiliate marketer.

Chasing grand, half-baked ideas isn ’ t likely to get you anywhere. At the same time, slaving away for the sake of bland, unambitious plans isn ’ t likely to pay out well for you either!

The Perils Of Analysis-Paralysis - A Very Important Side Tangent On Inaction

Based on what I just told you, affiliate marketing may have started to seem like an overwhelming prospect. As they look into affiliate marketing, lots of people start to think, “ What happens if I put in all of this work and it doesn ’ t pay off? ”

So instead of putting in any work, its back to the books and the drawing board. They ’ re waiting for that surefire billion-dollar idea that can ’ t go wrong to hit them. They ’ re waiting to discover that one chunk of missing information that will guarantee their success.

The problem with this? That billion-dollar idea never comes. That golden nugget of knowledge doesn ’ t exist. And so, yet another potentially exceptional marketer falls to the vicious cycle of Analysis Paralysis.

Yes, a certain amount of research will always be required, but that research is a means to an end. That end being: throwing your ideas against the wall to see what sticks. You ’ ll profit wonderfully when they do, and you ’ ll always learn something new when they don ’ t.

With virtually zero expenses required, the only way to strike out at affiliate marketing is by giving up or — even worse — by never actually going up to bat at all.

The only way to win is to play. The only way to play is to *try*.

There ’ s Something You Should Know And It ’ s Spelled S-E-O

Now back to websites.

You might be scratching your head at this point thinking that building a website for an affiliate

blog or authority site is beyond your skillset.

It ' s not. You don ' t need to know how to code HTML or JavaScript to build a website these days. You just need to know how to sign up for a free CMS.

That ' s shorthand for Content Management System. The best example is Wordpress.org, and it ' s the system that I recommend.

You ' ll also need to cough up ten bucks or so a month for hosting and the occasional bi-annual payment of another ten bucks for domain name registration (that ' s what gives you the rights to: "www.thenameofyoursite.com"). There are plenty of free and easy guides you can look up online to get this set up. It really is not a difficult task.

I recommend Dreamhost as your hosting provider because they have a wonderful easy Wordpress install feature. Simply register your domain, click a button on your control panel and presto, you have a fully functional CMS website up and running. All you have to do is start adding content.

Convenience aside, the best part about a CMS is that they structure the directories of your website in an SEO friendly way. SEO stands for Search Engine Optimization and it ' s a very important for us affiliate marketers.

The scope of SEO goes far beyond that of this guide, but a brief and simple primer is thus: name your URLs in accordance to the keywords that people will be using to find you in their searches.

For example, WordPress by default gives you the option to randomly assign every post a URL like:

www.yoursitename.com/?p=123zq

Now, a random string of characters isn ' t going to help the search engines index your article on a diet to prevent infant acne, is it?

With a little tweaking in your settings, you can have WordPress let you write the name of your URLs yourself. So instead, the URL for your post becomes something you ' ve decided is more fitting like:

www.yoursitename.com/infant-acne/a-diet-that-prevents-infant-acne-outbreaks

Google and other search engines are going to like that URL a lot better, and many more people will be driven to your site as a result.

But like I said, this is just the tip of the iceberg when it comes to SEO. Mastering SEO is by no means essential for success, but it ' s definitely worth looking into.

Just don ' t let it become another reason to succumb to analysis-paralysis.

Chapter Recap:

- Pick an affiliate marketing method that suits your niche and product, as well as your personal talents and tastes.
- Don ' t fall victim to analysis paralysis. Do as much research as you need to **then get to work.**
- If you ' re building a blog or website, look into SEO to maximize your chances for success

Chapter 4 – Expand And Diversify: Grow Your Business Like A Boss

This last point will be brief because, really, this chapter reads itself. It 's all there in the title.

The real beauty of a well done affiliate marketing platform is that — thanks to the nature of the Internet in general — it runs itself. Once you have a blog that converts traffic into commissions, you can put it on autopilot.

You can outsource new content for a fraction of the money that you 're making off the website. All of a sudden, you 're free to do other things with a completely passive income stream under your belt.

The wisest thing to do, of course, is more affiliate marketing! Build more websites for different products within your niche, or even for new niches altogether. It 's always smart to diversify.

The doomsday prepper niche is a hot one now, for example, but it wasn 't five years ago and who 's to say if it 'll still be a money-maker five years from now? You don 't want to put all of your eggs in one basket.

That goes for partners too. Don 't stake your entire livelihood on Clickbank because there 's always the possibility that they could disappear. It 's happened to major commission sites before.

I wouldn 't be so quick to worry about a goliath like Amazon, but there 's still the possibility that you could one day wake up to find a radical change to their Terms of Service that obliterates your profits from their affiliate program. They 've done it before in other areas of their business. Many people living very comfortable lives off their Kindle books woke up to find that a radical change to Amazon 's Kindle payout structure put them out of business.

Stability is definitely not among the many strong points of an affiliate marketing career. That 's really the case for all forms of profiteering on the Internet. I never recommend that someone drop

their 9-5 to make affiliate marketing their livelihood.

Not unless they already have some other marketable skills on backup in case their affiliate marketing success turns out to be fleeting. I make most of my money from affiliate marketing right now, but if the Internet disappeared tomorrow I wouldn't end up on the street

I could still make a living as a salesman and a marketer in a world without the Internet because I've invested in those skills on a fundamental level. I highly recommend that everybody do something similar.

Despite what I've just told you, there are thousands of online affiliate marketers that literally make tens of millions of dollars from their various affiliate platforms a year while they travel the country on permanent vacation.

Some affiliate marketers get offers from major corporations to buy their websites for a big lump sum. The potential for success is unstable, but also — as of now — unlimited.

Chapter Recap:

- Affiliate marketing is great but it comes with its risks as a sole source of income. Always have a backup plan in case things change in this ever-changing digital world.
- At the same time, don't let doubt and fear keep from your affiliate marketing dreams. As of now, there are people living the good life from their affiliate marketing success, so why shouldn't you be one of them?

Conclusion

From one entrepreneur to another, I wish you the best of luck on building your very own affiliate empire. There ' s so much potential in this world and plenty of room for everybody. This guide has only dipped your toes into topics that you could fill entire libraries writing about.

That doesn ' t mean that you need a huge tome of text to understand the principles of affiliate marketing on the Internet. Quite the contrary. Just by reading this brief primer, you ' ve already given yourself 90% of the knowledge you need to succeed. Go out there and use it.

Lessons Learned:

- Adopt a “ producer ” , not *consumer* mindset towards the Internet in general
- Your web browser is your workspace — take advantage of the countless productivity extensions out there to optimize your workspace for success
- Find a product or service that suits you to promote – both Clickbank and Amazon ' s programs are safe bets, but they ' re also two largely different animals
- Look around you for local affiliate marketing or lead generation opportunities
- Pick an affiliate marketing method that suits your niche and product, as well as your personal talents and tastes.
- Don ' t fall victim to analysis paralysis. Do as much research as you need to **then**

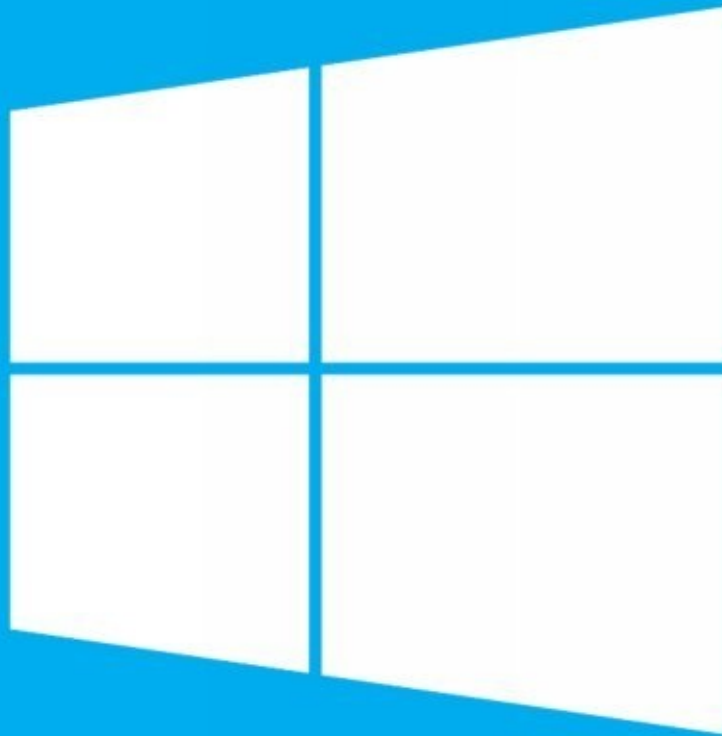
get to work.

- If you ' re building a blog or website, look into SEO to maximize your chances for success
- Affiliate marketing is great but it comes with its risks as a sole source of income. Always have a backup plan in case things change in this ever-changing digital world.
- At the same time, don ' t let doubt and fear keep from your affiliate marketing dreams. As of now, there are people living the good life from their affiliate marketing success, so why shouldn ' t you be one of them?

Windows



The Ultimate Crash Course to Learning
Microsoft's Intelligent New Operating System



James Clark

Windows 10

The Ultimate Crash Course to Learning Microsoft's Intelligent New Operating System

(Windows guide, Tips and tricks, Windows for beginners)

by James Clark

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Introduction

Windows. Along with its parent company Microsoft, Windows has been a household name for well over twenty years. During that time, it has had many ups and downs, going from being the gold standard of user friendly operating systems (OS), to universally derided bloatware and back again.

Windows 10, released in 2015 aims to bring the venerable OS back once more to glory. This is no small task given the less than positive response to the mobile friendly Window 8. The reception of Windows 8 was so poor that the folks at Redmond decided to skip right over Windows 9 in an effort to demonstrate a clean break with its predecessor.

Did they succeed? In a nutshell, yes. In this guide, we will be going over some of the changes Microsoft made that make Windows 10, while more of an organic development than a revolution, a worthwhile upgrade. We'll also be spending some time with brand new features like Microsoft Edge, Groove Music and more.

Finally, we'll let you in on some tips and tricks that will help you get the absolute most out of your new operating system and give you a peak what is coming in the soon to be (or recently released depending on when you are reading this) Anniversary Update.

Now, find your favorite computer chair and roll up to your desk or curl up with your laptop (or Surface) as we pull back the curtain on Windows 10.

Chapter 1 – Apps and Overview

There are a lot of new apps in Windows 10 that new users will be familiar with. Also, if you are upgrading straight from Windows 7, the mobile format will take some getting used to. Here, we ' ll walk you through some of those apps and talk about the overall look of the interface.

Getting Started

If you need a head start on figuring out what is new in your new OS, you can open up the Getting Started app that offers walkthroughs of many aspects of the operating system. If we miss anything that you are interested in, check it out for a quick look at whatever app you are wanting to get more information on.

The Look

One of the biggest complaints of Windows 8 was the default “tile” setting. Rather than a traditional desktop with a number of icons grouped along the left side of the screen, the whole screen was full of often oversized tiles optimized for touchscreens.

This was jarring for the average user who did not, and likely did not want to own a Windows mobile device. Finding this tablet-friendly design upon booting up a brand new desktop computer did not leave many people happy.

The truth is, there was a way to switch to a desktop mode but it was difficult to find.

Microsoft heard these complaints and designed their latest OS to sense what sort of environment it was operating in. So if you are running a Surface Pro 3, it knows that it is on a mobile device and presents the tile format by default.

If you are running a desktop computer, it will know that as well and boot up in a traditional desktop format. I run both a Surface Pro 3 and a desktop (sporting a 1st gen Intel i7) so I have

seen this work first hand.

Should you desire to switch formats (as I sometimes do depending on what I'm doing), Microsoft has made this easy. Simply swipe your finger or mouse from the right side of the screen and it will bring up a number of Quick Actions, among them being the option to switch from tablet to desktop mode. One click and the format changes.

It also simple to customize the tiles. A right click or holding your finger on a given tile will bring up a menu that allows to you to remove it from the screen or resize it as desired. You can also move the tile around the screen and group them together however you like. Adding and removing them is simple as well and very intuitive.

Another feature is that many apps utilize live tiles. This means that certain apps, such as a news aggregator will constantly display images and headlines of stories based on your selected interests. Other apps that make use of this are Sports, Money, Weather, Netflix and Outlook. And don't worry. If you find that the tiles constantly flipping is distracting you from actually getting anything done, you can turn them off.

The Triumphant Return of the Start Menu

Remember that nice little menu with all of your programs (remember referring to software as "programs" instead of "apps?") stacked up in alphabetical order? Just click the little Windows icon in the bottom left and there it was? Remember how great that was?

If so, then you might have heard that for reasons that no mere mortal truly knows, Microsoft got rid of it in Windows 8. Something about mobile is the future, tiles, blah, blah, blah. Fortunately, they heeded the cries of users the world over and put the Start Menu back in all of its glory.

In tablet mode, you find it by clicking on the list icon in the bottom left and you can then choose between letting it display only the most frequently used apps or all of them. Desktop does that and also gives you your tiles to the right of the list. And yes, you can customize them the same there as when in tablet mode.

This is definitely a much simpler way of navigating all the apps without having to either enter the app into the search bar, or pin a tile for every app to the start screen, eventually leading to having to scroll through several screens worth of tiles in order to find the one you are looking for.

And if you need for room for tiles so can easily access even more, just bring your mouse to the edge of the menu and drag it up or to the side to make it as large our small as you wish.

The Media is the Message

Windows 10 also comes with some decent media apps, Groove Music and the unimaginatively titled Movies & TV.

Like many music apps, Groove will search your hard drive for any music and automatically add it to its library. This includes music purchased through Groove, Amazon or uploaded from your own collection. There is also a monthly music subscription so that you never run out of tunes to listen to.

You can also add this music to your OneDrive account which will allow you to play it from any networked device that you have the OneDrive app installed on. And that can be almost any networked device as you can find a OneDrive app in the Google Play Store and Apple App Store.

Adding files to your OneDrive isn't quite as simple as it should be (at least not on my Surface) but it does work.

Movies & TV works similarly, aggregating anything you already have one your drive, including exports from video editing software.

Both apps have links to the appropriate area of the Microsoft Store so that you can readily purchase and download new music, movies and TV whenever it works with your schedule, wherever you are.

You can also access the Store via its own app within Windows 10. This is extremely handy in

that if you find yourself in need of a photo editor, or a quick game to play, they are both only a click away.

Purchasing within the Microsoft Store has certain advantages. One is that all apps in the store have passed Microsoft's security requirements. Another is that you only need to purchase the program once and you can use it on any Windows device the app is designed for.

It is true that the Store is limited in its selection, as many have pointed out. This is only a real problem for a little while though, especially for laptop and tablet users. When it comes to such devices, it is important to recall that while they may be mobile devices, they are also both running the full version of Windows and as such are really able to download any Windows program available, whether it is in the Store or not. This fact is one of those that drew me back into Windows after about a decade of using any other OS besides the one from Redmond.

Internet Explorer is Dead. Long Live Microsoft Edge.

Another of the biggest changes in Windows 10 is the death of Internet Explorer and the introduction of Edge as its replacement. Much like skipping from 8 to 10, this is something of a symbolic move, signaling a break with the old and the introduction of something far better.

In truth it is really more of a few steps forward to catch up to features that long time users of Chrome and Firefox will already be familiar with. Still, it is an improvement and some features bear mentioning here.

Tabs – Rather than having a new window open for every single site you are visiting, you can simply open a new tab, a feature that definitely keeps the screen clean and other open apps easier to find.

Frequent sites – When you open a new tab, a row of frequently visited sites will also appear near the top of the screen. If you are just hopping online to check a few things, this is a big time saver.

News – The default homepage is MSN news. While any given headline or article may not be your cup of tea, it is handy if you want a quick look at what is going on out in the world.

Search – Just as with Chrome, you can now type a search straight into the address bar, rather than having to go to Bing or Google's search page first. Another significant time saver if you are going to be searching for multiple items or topics. Naturally, since this is Microsoft, the default search uses Bing rather than Google. Also, I have found that this feature works better on my desktop than it does on my Surface.

Reading view – Up by the address bar, you will find a little icon that looks suspiciously like an open book. If you click on it, the webpage that you are on will be converted to a text and picture format free of ads and those blasted pop-up videos.

I personally think this is a great feature as some of the sites I visit will frequently have a number of videos that will play with no input from myself, often while already watching another video on the same page.

Write on the Web - By clicking on the writing mode icon, you can use your mouse, finger, or Surface Pen (the last two assuming you have a touchscreen of course) to circle, underline, highlight, and add notes to any webpage, the same as you would with any book. You can then save your notes for later reference.

Cortana

Cortana is Microsoft's Siri. Or rather, Siri is Apple's Cortana since Microsoft actually beat Apple to the punch by about a year. However, since almost no one owns a Windows phone, almost no one knew anything about Cortana.

Just as with Siri, you can ask Cortana to search the internet for specific information, have it set notifications for you and open up various apps.

Also like Siri, you will need to spend some time training the software to understand your voice. Fair warning here, unless you have a microphone that is intended to work with the software, results will be spotty at best.

Unfortunately, my Surface Pro 3 does not fall into that category so I can't say I have used it very much, though recent updates seem to have improved its functionality. If the voice recognition does turn out to be more trouble than it is worth, you can always type in commands.

If you allow Cortana to know your location, it will give you weather info, news and movie reviews. It will also pay attention to what you pay attention to, further customizing its content the more you use the feature.

The Getting Started app has many videos outlining numerous different ways to use your new digital assistant.

OneDrive

You might remember OneDrive from the section on media apps. Much like Dropbox, or iCloud, you can use OneDrive to upload your images, documents, videos or anything else to the cloud so that you can access the files later on from any device that has the OneDrive app. Adding files for the most part is only a drag and drop action, making it as painless as possible.

Reading List

This app allows you to save pages from Flipboard, Edge or any other compatible app, allowing you to pause reading that article on the Kardashians so that you can focus on something more important and go back what's going on with Khloe once the important work is done.

XBOX

You may have noticed that game consoles have been getting more and more like PCs for a while now. They have hard drives, RAM and the ability to surf the web. Now, you can even play your XBOX games on your Windows 10 PC. The app even lets you sync achievements, friend lists

and all the things you expect in the age of multiplayer.

Through the Game Bar (access using Windows + G), the XBOX app also lets you record the activity on your screen. You can also make use of the Game Bar as another way to get screen shots.

Hello There

Windows Hello lets you use your fingerprint, iris, or face to login to your computer. Naturally, you will need the appropriate peripherals to support this feature. Unless of course you plan on getting a Surface Pro 4 or Surface Book, which come already equipped with a fingerprint reader.

Action Center

This is a handy area where many notifications will be displayed. Again, these can be configured to your preferences, allowing you to quickly check for new mail, news items, flight reminders, software updates and of course the weather.

Below the notification section is a number of tiles allowing quick access to various settings. The Wi-Fi tile is especially useful for those on-the go from one Wi-Fi hotspot to another.

Chapter 2 – Tips and Tricks

Anyone who knows even the slightest bit about computers knows that there are always a few dozen shortcuts and mini-features present in any program, things that most of us would never stumble across.

We find one way to get something done (probably the same way we've been doing it since our first computer) and keep chugging along, all the while unaware that there may be a better way of doing things hiding right under our noses. Let's take a look at a few of them.

Multi-tasking

Snap Assist – This is a feature I use almost every time I login to my Surface. Simply use your finger to drag an app over to the side of the screen and it will fit itself to half the screen. Any open apps will then be displayed in Task View on the second half of the screen, allowing you to select which one you would like to be filling up the other half.

This works a little different in desktop mode. In desktop mode, you can drag the app with your finger or mouse to a corner, at which point it adjusts to a quarter screen, allowing you to have four apps up and running and easy to access without a lot of cumbersome resizing with the mouse.

Both modes are useful if you are needing to do two things at once, such as researching a topic for a book you are in the process of writing.

Task view – There is an icon down in your task bar that looks a bit like a tri-fold display. Clicking on that will display all of your open apps in a thumbnail format, allowing you to quickly find the app you are looking for.

Background scrolling – This lets you scroll through any open app, whether it is in the foreground or not. No, this does not mean that you can scroll through apps in Task View. Maybe in an upcoming update.

Alt + Tab – For those who prefer to keep their hands on the keyboard, this shortcut does much the same thing as Task View. The big difference is that if you keep holding the Alt button while tapping Tab, each app will be highlighted, allowing you to find and bring up any open app extremely quickly.

This feature has actually been around for a long time but it is so little known that it is worth mentioning here. I've been using it myself lately and find it the most efficient way to sort through my open apps.

Virtual desktops – Do you have trouble staying away from Skype or your favorite casual game when you really should be working? Well, you can minimize that by making use of this little feature in desktop mode.

Hitting the task icon and then the big + in the bottom right corner of the screen will let you choose between and set up brand new desktops. That way you can keep business and pleasure separated on the same computer.

Keyboard Shortcuts

In addition to the beauty of Alt + Tab, there are a number of other shortcuts in Windows 10, most of them centering on the use of the Windows key. As with other features discussed in this guide, some work in both tablet and desktop modes, while others only function well in desktop mode.

Windows + X – Brings up a list of features like Task Manager, Computer Management, Disk Management, Command Prompt and more. This menu is also accessible by right clicking the start button.

Windows + C – Launches Cortana's voice recognition.

Windows + D – Clears the screen and shows the desktop (desktop mode only).

Windows + I – Brings up the standard setting menu. Not god mode, just the normal settings.

Windows + S – Brings up the search bar and Cortana's home page. Windows + Q does the same thing.

Windows + E – Launches File Explorer.

Windows + P – This brings up a menu on the right that lets you decide how to best utilize an extra/external monitor.

Windows + H – Allows you to take and share a screenshot of your work. This is much less cumbersome than using the snipping tool.

Windows + L – Locks the screen.

Windows + Arrow keys – Doing this in desktop mode lets you move your apps around the same as the Snap Assist described above.

Windows – Just tapping this button in tablet mode lets you alternate between the desktop (or home screen if you prefer) and whatever you had on the screen before that.

There are other commands that are worth learning. The best thing that you can do is simply play around with the Windows, Ctrl, and Alt keys to find out what little nuggets Microsoft has hidden in there.

If you take the time to learn and practice them, they will definitely increase your productivity and decrease your frustration levels as you will not spend as much time going from the keyboard to the mouse and more importantly, not have to hunt through hordes of menus to find the features you are looking for.

Behold the Power of God Mode

Yes, Windows 10 has a god mode. No, you will not instantly be able to create new realities *ex nihilo* (not even digital ones) it is useful if you are trying to make adjustments to your system and are having a really hard time finding the setting you are looking for.

This is actually a common complaint with Windows in its last few iterations. Whereas at one

time all you had to do was open the Control Panel and you could find any setting you wanted, recent changes have made the menus easier to navigate for casual users, resulting in many settings getting buried.

This isn't a huge problem for power users who always seem to be able to find what they need. However, for those of us somewhere in between the two extremes, the changes can be maddening. God mode solves those problems.

Simply create a new folder on the desktop and name it this:

GodMode.{ED7BA470-8E54-465E-825C-99712043E01C}

When you open the folder, you will find access to every setting possible without getting into direct manipulation of the code. For those who do like to tweak their computers at least a little bit, this will be a huge time saver as you no longer need to hunt through numerous programs and menus to find what you are looking for.

Touch Screen Gestures

I know, not everyone has a touch screen so this is not universally relevant, but it is prevalent enough that it warrants its own section.

Pinch zoom – Move two or more fingers closer together or farther apart in order to zoom in and out, just as you do with most touchscreen devices.

Scrolling – Just swipe a finger up or down and you can scroll through any document with ease.

Task view – In addition to the icon, you can also activate Task view by swiping in from the left of the screen.

Action Center – The Action Center is activated by a swipe in from the right.

Closing an app – Swiping from top to bottom will automatically close any app.

Chapter 3 – Privacy Settings

In this strange age in which we live, it seems as though everyone is always watching, whether we want them to or not. To that end, Windows 10 makes it possible to greatly increase your privacy above the default settings.

Do not track – This is an Edge feature that will come already turned on. The purpose is to prevent websites from gathering information about your browsing and search habits as well as location.

Start menu – If you don't want nosy people knowing what apps you have recently installed or use the most often, you can turn off those features in the Personalization settings.

Location – Speaking of location, all kinds of apps these days want to know where you are. You can actually deny them access by going to Settings > Privacy > Location where you can turn off the feature for every app with one click. If want to customize things more, you can leave the Location toggle on and simply turn it off for all the apps you don't want tracking your location.

Camera – You would be surprised by how many apps want to use your camera. I for one have no idea why CNN thinks it needs to use mine. Or my printer app. Such things truly boggle the mind. In any case, the Privacy settings let you turn off each app's access to your camera so you can be reasonably certain that Wolf Blitzer isn't spying on you.

Getting to know you – Microsoft likes to collect data on the people who use their products, like most companies these days. Sometimes it is for marketing, sometimes (as in this case) it is to learn how you speak and write so that they can develop better voice

and hand recognition software. Fortunately, you don't have to let them.

Simply click the Stop getting to know me button and it will stop. Cortana will also forget everything she already knows about you.

These are just a handful of things you can control. You can also deny access to your contacts, account info, calendar, email, messaging, Bluetooth radios and more.

Another privacy setting not actually in the privacy settings is to turn off Peer-to-Peer updates. This is basically a feature that allows one computer to send update files to other computers on the network. To be fair, I'm not sure this is really a privacy issue, but if you want to test an update on one computer for a while before updating the rest of the computers on your network, then this is probably a good thing to turn off.

You do need to dig deep for this one though. Settings > Update & Security > Windows Update > Advances Options > Choose how updates are delivered will get you there. Finally, turn it off and you are set.

Hidden in Plain Sight

Have some information you want hidden from the general public? You can actually create a folder on your desktop without a name or icon.

Here is the rundown:

- Create a folder
- Right click and go to properties
- Select change icon
- Select a blank icon and hit OK and Apply
- The folder has now disappeared

- Right click on the folder again
- Select Rename
- Hold the Alt key, and using the number pad, press 0160
- Hit Enter
- The name is now gone and you have a completely hidden folder

If you lose it, you can just hit Ctrl + A and it will select all icons, including the hidden ones.

Chapter 4 – What's Next?

You might have heard while you were browsing about on a news site that Windows 10 is actually the last version of the operating system from the fine folks at Redmond. How can this be you ask? Is Windows dead? Are they going to have another OS with a different name?

Worry not citizen of the internet. Microsoft is simply moving away from the traditional model of software development in which a whole giant piece of software is developed and then released to the public for \$120.

Instead, they are simply going to continually release new updates for the software, with new fixes and features as often as necessary. Clearly, Microsoft believes that their source code is flexible enough to allow them to tweak and stretch it for the foreseeable future. Others, such as Adobe have gone a similar route, eschewing regular releases of a physical product in favor of continuously updated software all connected in the cloud.

No doubt, at some point in the future a new interface technology or change in chip architecture will force Microsoft and everyone else to go back to the drawing board and release a brand new operating system built from the ground up. But those developments seem to be fairly far in the future.

In the meantime, Microsoft's first significant update based on this new model is set to be released in just a few days from the time I am writing this. In fact, it should already be available for download by the time you are able to read it.

The first thing to note is that the Anniversary Update was developed with extensive input from users. Microsoft started an Insider program that allows members (it's free for those who are interested) to test out new features months before they are released. And not just a few users.

There are nearly 10 million members of the insider program as of this writing. That means this new update was developed with input from a population the size of New York City using it for months with the ability to provide suggestions on what to keep, what to dump and what to create, rather than the typical bug reporting that most beta testers are used to. This is the first time this has happened for a major operating system.

So, what is coming in the Anniversary Update? Here a handful of updates that you can look forward to in the very near future.

Chase-able Tiles – Remember those nifty little Live Tiles we talked about a few pages ago? They are getting an upgrade. If you recall, Live Tiles display the latest news and updates relevant to the app. Well, until the update, if you saw a tile you were interested and clicked on it, it would only open the app.

So now you have to hunt for the information that interested you in the first place. Personally, I have found this pretty annoying. But no more! Chase-able Tiles will take you directly to the information that prompted your clicking to begin with. No longer will you have to hunt to find the latest sports scores.

Action Center – Some have found the Action Center to be lacking a bit in functionality. Now, though, with changes to both the notifications and Quick Actions, those people should be much more satisfied.

Notifications can now be heavily customized, adjusting the size, adding images and more to certain notifications (dependent on app support). You can also do things like choose which apps have priority over others.

Let's face it, lots of apps are more important than others, though you still like to be notified when the sushi place downtown has a lunch special. Now, you can make sure the more important things show up at the top and are always visible without missing out on Dragon Rolls.

Your notifications can now be synched across multiple devices as well, including your Windows or Android phone thanks to a little help from Cortana. Not only are the notifications showing up everywhere you want them to, you can also dismiss them from all of your integrated devices at the same time.

The Quick Actions will now be fully customizable as well, rather than being completely set in stone like they had been.

Dark Mode – There has been an option to essentially change your theme to black since the release of Windows 10. However, Microsoft has now made this much more comprehensive, making it possible to set the default color for all of your apps to black with just a few clicks of the mouse or pokes of the screen. The advantage is that your display will use less battery without all the color.

Edge – There is a lot going on with this one, but the biggest is definitely the ability to add extensions. I know, Chrome and Firefox have always been able to do this. Why Microsoft is just now catching up, I don't know. But it is here now, so get ready to add in your pop-up and ad blockers.

Cortana – There is no way that Microsoft can do an update without upgrading its digital assistant. One of the big upgrades here is that you can ask Cortana to check the weather, play your favorite album and more from the lock screen. If that is sounding a bit like Amazon's Echo, you are on the right track.

Conclusion

One could easily fill up a few more pages with all of the features and customizable settings in Windows 10, both those currently available and those still to come. At the end of the day, Windows has managed to bounce back from the debacle that was Windows 8 and looks to be set to help regain some of Microsoft's lost glory.

If you have not upgraded by the time you have read this, you have unfortunately missed the opportunity to get Windows 10 for free. However, if you have a newer PC or Surface Pro that is running Windows 7 or 8, it would be worth it to upgrade and get in on what is probably Microsoft's best OS to date.

You can find it for under a hundred dollars and I would consider it money well spent if you use your computers for anything more than general emailing and entertainment.

With a little luck and determination, Microsoft will continue to build off of the success of Windows 10 and so help millions of users the world over get their work done faster, with a good deal less frustration. I for one have definitely benefited from many of the features outlined above and I'm sure you will as well.



AMAZON TAP

**THE 2016 BEGINNER'S USER GUIDE
TO START USING AMAZON TAP LIKE A PRO!**

NOAH ROBINSON

AMAZON TAP

The 2016 Beginner's User Guide To Start Using Amazon Tap Like A Pro !

by Noah Robinson

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INTRODUCTION

This enabled Bluetooth/Wi-Fi speaker is one of kind and unique innovations from marketing and tech giant Amazon. It always makes you feel ready, enthusiastic and connected.

As it makes use of far-field voice recognition that allows you to get the information that you need right away, fill the room with sounds and music, learn the latest weather updates, and you can also connect it to certain devices that you have with you.

I know you are much eager to know more about Amazon Tap, yes of course, right? Proceed reading this book to acquaint you my readers with all information pertaining this product. You ' ll learn how to make the most out of Amazon Tap, and get it to do what you want it to.

In this world we are living in today, technology is advancing each and every day. New and computerized products are now made easy to us. A good example of this great and advanced product is the Amazon Tap.

Amazon Tap is a small cylindrical shape like device that uses WIFI or BLUETOOTH to function. This is also a portable speaker device that works by just tapping the microphone button and ask for any information you want including music. This device is really amazing on its own, also known as “ ALEXA ” a voice that respond to many questions given to her.

I know now you still can ' t imagine of a small object responding to your question and help you solve some of your problems. Amazon Tap is indeed an amazing product from the Amazon Company.

This device can answer all your questions provided you knew how to phrase them correctly; it can as well carry out simple calculations for you including the number of strides you make while walking. A device that could tell you the weather today and calculate for you how many more miles you need to run when working out. This is really amazing.

With the improvement still done to it, this amazing product will be controlling your every activity around the house. It is a combination of a wireless music player, a voice assistant and a home automation hub.

It was at first, sold exclusively to Amazon prime members on an invites only basis. The invites kept increasing over time as Amazon put in more effort in producing a more refined product.

During its launching, the Amazon Tap had limited abilities. It was tied to Amazon ' s music service and allowed users to play songs from the users ' own playlists. It also allowed the company ' s members only to enter voice commands. It could even tell you the weather and answer some basic fact questions.

Other than that, it was largely limited. It was also equipped with a few cute extras which were worth the discount price offered.

It seems like every week new features are being added to the Amazon Tap. It has now been released to be openly purchased and as you take home your Tap, you can be sure that there is a bright and broad vision for it

CHAPTER 1- AMAZON TAP ADVANTAGES

The Amazon Tap is most reliable device; it has a rechargeable battery and can be as well being connected to a power source. Due to its rechargeable battery, the Amazon Tap has an advantage over the Amazon Echo to some extent since you can carry it with you, making it portable. This one the first advantage of this Amazing product from Amazon.

1) Help solve problems by providing answers

As stated earlier, if it does not have the answer to the question that you asked, it will go an extra mile and search for it on your behalf. Therefore to an extent we can conclude that it has the answer to virtually every question as long as you phrase it the right way.

2) Up-to-date info

The Amazon Company always makes sure that Amazon Tap is updated constantly, so you can be sure that the information you are getting is up to date and reliable.

3) Provides entertainment

Some apps that have been installed are aimed to entertain you. So after having a long day, you can count on your Amazon Tap to help you relax and refresh your mind. When you are busy and your child is crying, or when you just want to keep your child occupied, you can use apps such as “ Simon Says ” and others to engage or distract your kid until you finish up your work.

4) Saves time

It saves you a lot of time because you can ask it perform some tasks for you when you are caught

up by many chores. It also saves you the time and money for buying a home automation hub.

NB: Alexa knows where her name came from! Not so many people know where or who they were named after but for a machine to know where its name came from; that is just incredible. Alexa knows that she was named for the library of Alexandria which was used to store the knowledge of the ancient world.

5) Help out with pronunciation

The Amazon Tap can provide pronunciation of words which may be difficult for you to do so. Alexa can understand complicated questions and help you out with your spelling. Just ask her, “ Alexa, how do you spell the word ‘ conscious ’ ? ” she is always quick and ready to help. In addition, she can understand some commands like turning the volume up or down. It always feels like magic just watching her perform the tasks.

6) Buy A Song

It has the added advantage of being able to buy a song for you. For example, when it is playing the 30 seconds preview of “ Thinking Out Loud ” , just say “ Alexa, buy that song ” and voila! It will be added to your Prime library. You can also control your playlist from the comfort of your couch just by saying, “ Alexa, play something else. ”

The Amazon has an app which is much like a store for all your history of activities and to do list that you have used on Alexa. It also acts as a user guide on how to talk to Alexa and how to issue your voice commands.

The list are created by Alexa and you can access them anytime you are having a problem with issuing a command or when you want to learn more about making Alexa more friendly.

The Amazon Tap gives the most successful and most satisfying answer when you speak freely to it

and when you trust it than when you have to think about what you are saying.

The good news about Alexa is that it does not have problems with its hardware. It has a speaker that is fully functional and the microphone is good enough to record clear audio that is up to 30 or 40 feet away.

It stores every question with a brief audio clip of your voice command on the History screen in the Amazon app. You can scroll through and listen to how exactly you asked the question. This will help you correct yourself in case you gave out the wrong voice command.

Amazon has also gone a step further to enable Alexa to ask you if the Amazon Tap heard you correctly. Therefore you are in a position to repeat yourself in case you were wrong, or to repeat your voice command in case you were not audible enough.

The Amazon Tap is a good music player due to its added bonus of a built-in voice control that is excellent. Its functionality has also been greatly improved by the addition of some other apps like weather, traffic, and news features among others.

CHAPTER 2- OPERATING AND SETTING UP AMAZON TAP

The Amazon Tap speakers can be set either via Bluetooth or Wi-Fi and unlike the Amazon Echo speakers can only be set via Wi-Fi. One of the most useful connectivity is the Wi-Fi, it help The Tap to access a lot of information from the internet.

The Wi-Fi network is the one that give sit access to all the information needed. Without Wi-Fi connection then your Amazon is less useful.

It fully depends on the internet when carrying out its tasks. It also takes a few minutes every time you move into a new Wi-Fi network.

Tips to using the Amazon Tap

Turning on you ' re the device

- 1) On the power button, press and hold it.
- 2) You will notice a glowing light on the button
- 3) If you need to put the device into sleeping mode, press the same power button.

Also, you need to press the microphone button to activate the device and the same time talk to Alexa.

Connecting to the Wi-Fi

- 1) The Amazon Tap got the Alexa app, in this app you need to open the left navigation panel to select the settings.
- 2) After you open the settings, select your preferred device and select update Wi-Fi
- 3) Also, you need to press and hold the Wi-Fi/Bluetooth button till the indicators light turns orange.

AMAZON TAP BEST COMMANDS

Sometimes, the reason you feel like Alexa isn't able to understand you is because well, she really couldn't understand what you're trying to say.

However, there are certain words and phrases that she knows best "Easter Eggs" that have been compiled and agreed upon by Alexa's frequent users. You can make variations, as long as the main words (i.e., wake me up, what time, set timer, etc.) are there.

Here's what you have to keep in mind.

These should make you feel more efficient and productive.

FLASH BRIEFING

Flash Briefing is basically Amazon Tap's way of bringing you the latest news, by means of sending you articles, and also with the help of weather updates. You can always customize this on your Amazon Tap account.

To let Alexa bring you the latest news, say the following: Alexa, what's in the news? Alexa, what's in my Flash Briefing? Alexa's answers well all this questions, giving accurate feedback.

FUN AND FACTS

Alexa have a lot of information to tell you, she can tell many things even yourself didn't know. Try asking her the following questions like: Alexa, can you tell me about the latest song?

WEATHER

As discussed earlier, Amazon Tap can give information regarding the weather. Alexa can tell you about weather situations not only in your place but also in your target destination. For instance, ask Alexa, what's the weather in California today?

AUTOCAST, VOICECAST AND HOUSEHOLD PROFILES

If you happen to have a Fire Tablet, you can let it work in sync with Amazon Tap, too. First, you have to check Settings, followed by Amazon Tap, and then turn Voicecast and Autocast on.

You can do this not only on your device, but also for the device of a friend, or someone at home but, you have to connect that device with Alexa, too. You can do that by going to your account on the Amazon Tap Website.

TRAFFIC

You can ask Alexa about traffic, too, provided you still have time before your trip, or you have Alexa with you in the car. Try these: Alexa, what ' s traffic like right now? Alexa, what ' s my commute? Alexa how is traffic?

SHOWS, STATIONS, AND SPORTS

Alexa is also one big pop culture geek, and a big sports fan, too. Just make sure you have connected certain apps, such as Pandora, TuneIn, or iHeartRadio, among others, to your Amazon Tap account.

TO-DO LISTS

One of the best things about Alexa is that she reminds you of your To-Do Lists, and somehow, helps you fulfill them, too. Try the commands below and see what happens:

BLUETOOTH REQUESTS

You can also stream audio from your Smartphone through Alexa, but you have to make sure that you have paired the devices.

Now, once you have the two connected, you can immediately connect the device (whether Smartphone or tablet) to Alexa. Make sure the device is in range.

One thing you have to keep in mind, though, is that when you ask Alexa to play a specific song or playlist, mobile playback will be paused and disconnected, and you ' d only be able to play music from your Amazon Music Library. Just say Alexa Connect for you to be able to stream from your mobile device again.

EASTER EGGS

These are the commands that will probably make you gasp, laugh out loud, or think that Alexa may be smarter than she lets on. Try the commands/cues below: Births and deaths of famous people Inventors/Scientists/Artists Antonyms, synonyms, definitions, spellings Actors/Actresses and which shows/movies they starred in Alexa, do you like green eggs and ham?

CHAPTER 3- IMPROVING YOUR AMAZON TAP ALEXA

The thing with Alexa is that you can actually make her smarter. Train Alexa so she 'll understand you better Just like friends, or anybody new in your life, it ' s just imperative that you also get to spend time with Alexa before you use her. A two minute training session would already do you a lot of wonders!

Basically, during this training session, try to give out as many commands as possible, and also include phrases to pronounce and let Alexa repeat. So, it ' s a chance for her to get to know your voice, and pattern her responses to it.

To do this, simply head on over to the Amazon Tap app, open the sidebar, and then read the phrases listed there. Recite them in your natural voice. Don ' t try to be robotic.

You can also train Alexa by making sure that you have given her as much feed-back as possible. Take note that every time you ask Alexa to do something, a “ card ” appears onscreen.

The purpose of this is to give you more information about what ' s happening, but take a good look at it and you ' d notice that it ' s sort of a feedback form that you can use to tell Amazon whether Alexa has been helpful or not, so that her features would be improved in time.

Also, don ' t forget to enter your location. This will help Alexa provide you with more accurate answers or reports, especially when it comes to weather reports, sports events, and flash briefings, amongst others. To do this, just go to Amazon Tap app, check Settings, followed by [Your Name] Tap, and finally, Tap Drive Location.

OTHER SECRETS

And of course, it ' s best that you know all the other things that you can do to make Alexa work in the best possible way. You can ask Alexa to repeat her answers. Yes, you actually can ask Alexa to repeat what she had just said; especially if you didn ' t understand her on the get- go.

Just say, Alexa, can you repeat that? Try to enunciate this clearly because Alexa won't always understand if you just say repeat that.

Alexa is a great mathematician! Be honest: not everyone is skilled with numbers. Chances are you probably get confused more often than not, too. However, don't try asking Alexa to divide Zero by Zero. She'd probably not answer you.

Let Alexa control only the lights you need. You don't have to ask her to turn all the lights on when you only need the desk lights on. And, you also don't have to tell Alexa to turn all the lights of if you only need a single space in your house to be dimmed.

For example, if you want the lights in the kitchen to be turned on, you can just say, Alexa, turn kitchen lights on, and you can expect her to do that.

You could also try to let Alexa know that a certain space in your house belongs to you. So, for example, you'd say My Lights while you're in the living room, Alexa would understand that those lights are what you want her to control.

Then, you could ask a friend to say My Lights while he's in the kitchen, so Alexa would recognize that space as something else.

You could also try tweaking the lights program, especially if you've connected Alexa to Philips

Hue

CHAPTER 4- THE MAIN FEATURES OF AMZON TAP

Since its launch, the Tap has been equipped with very many features including both the useful and the less useful ones. For example, it has the feature called ‘ Simon Says ’ which enables it to repeat every word you are saying. One thing that is constant is that all features, whether useful or not are easier to use and some of them can actually solve your problems.

We can be allowed to call Alexa a “ brain ” that is cloud based. Due to this, it is able to update itself since it is connected to the internet.

Amazon has continuously added new features to an extent that even the prime purpose as to why the Tap was created (which was to be a music device) has been largely improved. This has been done by linking it to a number of apps such as Prime Music, Pandora, Amazon Music, Audible iHeartRadio, and TuneIn among others.

SOME OF THE BEST FEATURES OF THE AMAZON TAP

1. Belkin Wemo and the Phillips Hue products

These two features have been integrated in the Amazon Tap in order to perform many amazing skills around the house on your behalf. For example, they enable the Amazon Tap to turn on the bedside lamp before you get out of bed, or to turn on the fan without you getting up from your favorite chair.

They can also be used to dim the lights as you prepare to watch your favorite movies from the couch. All these will be done without you lifting a finger. These two features turn your house into a connected home. This is the feature that will make the Amazon Tap end up in the living room of most people.

2. Google Calendar

The Google Calendar has been integrated in the Amazon Tap to take care of your schedule. You

can be able to quickly access your schedule just by asking your Amazon Tap. It is in a position to let you know if you will be available for dinner with friends on a particular day. All you have to do is feed in your voice command and that 's it. You can also use it to save any changes in your schedule for future references.

3. It can be used to keep track of the sports scores and their schedule

You and your friends might be super fans of a particular sport (or particular sports). Ever been out maybe drinking and then your friends start to discuss the scores of the game but you can ' t contribute since you missed it? Yeah, most of us have been there too.

However, with your Amazon Tap at hand, you will never have to worry about missing a game. If you want to know the scores of any particular game, all you have to do is ask! This feature is able to provide to you the scores of the game and also give you the full schedule of the sport including when it is scheduled to be playing next.

4. Traffic

If there is a place where most people lose a lot of time and there is nothing they can do about it, it should be in traffic. Whether you are working or just going out for a ride, traffic affects you in one way or another. The worst case scenario would be when you are going out for a job interview or an important meeting, or it ' s your first day at work and you are running late because you have been caught up in traffic.

Believe it or not, the Amazon Tap takes care of this too. All you have to do is to save in your work address and Alexa is in a position to let you know the quickest route to work. It can also calculate the travel time so you choose for yourself the option that best suits you.

It also provides the option whereby you can choose to include a stop. For example, if you have to pick up a child from school or if you have to drop off some mail or pick up a cup of coffee, just include the address in your voice command and this amazing Tap will do the math for you.

5. TuneIn

This feature enables you to access customized news from many more sources including news Flash Briefing, NPR Business, ESPN Radio and TMZ among others.

6. Making orders

Alexa can also allow you to re-order some products that are Prime-eligible though this may be a little bit challenging to do without having to click the associated app.

AMAZON TAP AND ALEXA

As stated earlier, Amazon Tap was at first not made available to all consumers but, later on it was made the available to third parties. This provides a platform for the exploitation of each and every inch of the Tap ' s potential for example the free Alexa Skills Kit. Alexa is the name that the company has given to the voice assistant inside the Amazon Tap.

The kit consists of the following:

- 1) It consists of a device maker which has a sprinkler system connected to the internet. The sprinkler system may also be integrated with Alexa. This enables a user to give voice commands.
- 2) It also contains a surf-report provider. This is used to create new skills for Alexa which provides more options for her. For example, the user can ask Alexa for their latest conditions during their break by telling, “ Alexa, ask Surf Status for my forecast ” .
- 3) If the third party is involved with making vacuums, they can create a skill for Alexa where the user can enter in a voice command.

- 4) The fitness service may also add a skill in the Alexa Skill Kit such that the user feeds in information about his working out history and then Alexa can calculate the number of miles the user ran.
- 5) The fashion service can also add a skill. For example, they can feed in information about the appropriate outfits for some specific functions. Then the user can get it by asking, “ Alexa, ask My Fashion what is the appropriate outfit for a job interview for ladies. ”
- 6) The shoe industry can add a skill that enables a user to know their appropriate shoe just by feeding in their shoe size. For example “ Alexa, ask My Shoes the appropriate lady shoes for a size 6. ”
- 7) Supermarkets can use Alexa to make shopping easier. For example, they can add a skill that enables the user to add items to their shopping list via voice commands. For example, “ Alexa, add 2kg of sugar to My Shopping List ” .
- 8) Parents can take advantage of Alexa ’ s skills to help their kids with their homework. This is possible because Alexa can answer virtually any question provided it is phrased the in the right way.

One amazing feature about Alexa is that if it is not in a position to answer your question it will automatically paste it on Bing (and only Bing) then search it and provide the answer! If you doubt this you can try it for yourself, just ask it, “ Alexa, what is probability? ” or “ Alexa, who is the first president of the United States of America? ”

- 9) The Amazon Tap can also tell you the weather. For example, you can try asking it, “ Alexa, what is the weather today? ” after sometime you will receive a reply, “ Right now, in Los Angeles it is 22 degrees with cloudy skies.

The weather forecast of today is mostly sunny, with a high of 27 and a low of 18. ” It is amazing how accurate and specific Alexa can get sometimes. This will also help you know how to dress up for the day. Alexa will help you avoid situations where you are wrongly dressed for the weather as it mostly happens to the ladies.

10) It can also be used to tell the time and to set alarms and timers. She has a robotic but very friendly voice. Though she still has a long way to go before becoming fully functional in a lot of situations but there is still hope.

It always feels amazing when interacting with the Amazon Tap since it just has very many abilities and it is efficient in its activities and when carrying out commands. It is also encouraging to know that whenever you need something done, all you have to do is ask.

However, the developer tools in Alexa are not just used in the Amazon Tap. It has been proven that they can be used in other third party hardware. The user base that has already been installed targets a larger audience.

With the Alexa Skills Kit, programmers can see a very huge potential since they can integrate it with virtually any device that can be connected to the internet ranging from home security lights to heating systems among others.

CHAPTER 5- AMAZON TAP IMPROVEMENT

The Amazon Tap is already a jaw dropping invention on its own and Amazon is already doing a great job trying to improve its features and exploit its full potential. This device has many exciting features that will make you day warm and enjoyable. A little bit in its accuracy will help much by making it more effective. It should also be made more powerful by including more useful apps in it.

Amazon Company is slowly introducing it to its customers. It is most exciting and interesting when you inquire ask questions and you immediately get the exact feedback you want.

Amazon ' s marketing abilities and some of the apps installed in the Amazon Tap are enough to convince you to purchase one. Most people will purchase it largely because of the home automation abilities even though that is not its primary purpose.

Each and every day, new technological advancements are made and it is difficult to keep track of all the changes taking place all around us. The Amazon Tap is one such advancement and the fact that it is still developing should be enough to keep an eye on it.

If this is just the beginning yet it can carry out many tasks like holding a steady conversation with someone, what about the near future? It is just amazing how this device is able to interpret commands and other instructions and provide the necessary feedback as well.

It is true that it has little limitations right now, but this should not be used to discourage its developers as there is still much more room for improvement.

Since it has already been made available to third party developers, Amazon Company is doing an amazing job and they should consider maximizing its full potential since it is an amazing device.

One of the surest ways of improving on its abilities would be the use of more apps since apps have the potential to perform virtually any function and this is what we are anticipating from this

device. In these days more and more apps have been developed to increase the efficiency of most processes.

This device can do great things and we as the users we are anticipating for much amazing apps that can aid carrying out day to day activities.

For example there is an app for boosting the working speed of a machine, an app for waking you up in the morning, an app that helps you monitor your diet and monitor your exercise regime, if all these could be included in the Amazon Tap (the ones which have not been included yet), this could largely increase the functionality of Alexa.

The Amazon Tap has unlimited abilities and unlimited potential. It is very efficient in its abilities and functioning and Amazon is working hard to try and personalize it so as to suit the needs of most of its customers.

New and more advancement are done to this spectacular device, the Amazon Tap and sooner than you know it will be in everyone ' s living room. Till then you better hurry and grab your own Amazon tap while stocks last!

DOWNSIDE OF AMAZON TAP

Apart from many good and amazing things you can get from Amazon Tap, you should also be aware of the downside of this product. Not everything is made perfect, but we should always try to look for ways to improve and solve certain problems. Everything has its pretty side and its less pretty side; and Amazon Tap is not an exception.

These demerits include:

1) Be specific while giving orders

One thing about Alexa that stands out is that you have to be very specific when giving your voice commands. For example, you should specify which kind of song you want, if you just ask her to play songs without specifying, she might give you the shock of a lifetime.

When you give her general orders she will give back general answers. Like in the case above, if you did not specify the song you want her to play; she will play any song from any category.

2) Start with name Alexa

Another thing to take note is that when addressing her you should always start with the name “ Alexa ” could also be another alternative though the former (Alexa) is better.

If you fail to do this the Amazon Tap will fail to get your command. Additionally, it may even fail to hear your request and sometimes it may not be in a position to interpret your command.

3) Fail to answer queries

Sometimes she may fail to know some answers to basic questions. For example, she may give you the answer to the name of the first president of the United States of America but she may not know the name of the second president of the same United States of America.

When it comes to her, if a command fails to register, it just fails and there is nothing you can do about it. The only feedback that it gives to show that it is working is a blue green light. Other than, it is difficult to tell if it is fully functional or not.

NB: It is also important to note that soon as Alexa starts playing music at any audible volume, it becomes as good as any other normal speaker. No matter how loud you shout a voice command at it, it will not respond and by the time you get up from your couch and turn down the volume, the fun is already gone.

Alexa is good when searching for music but not when playing it. The music coming out of it sounds shallow, compressed and tiny.

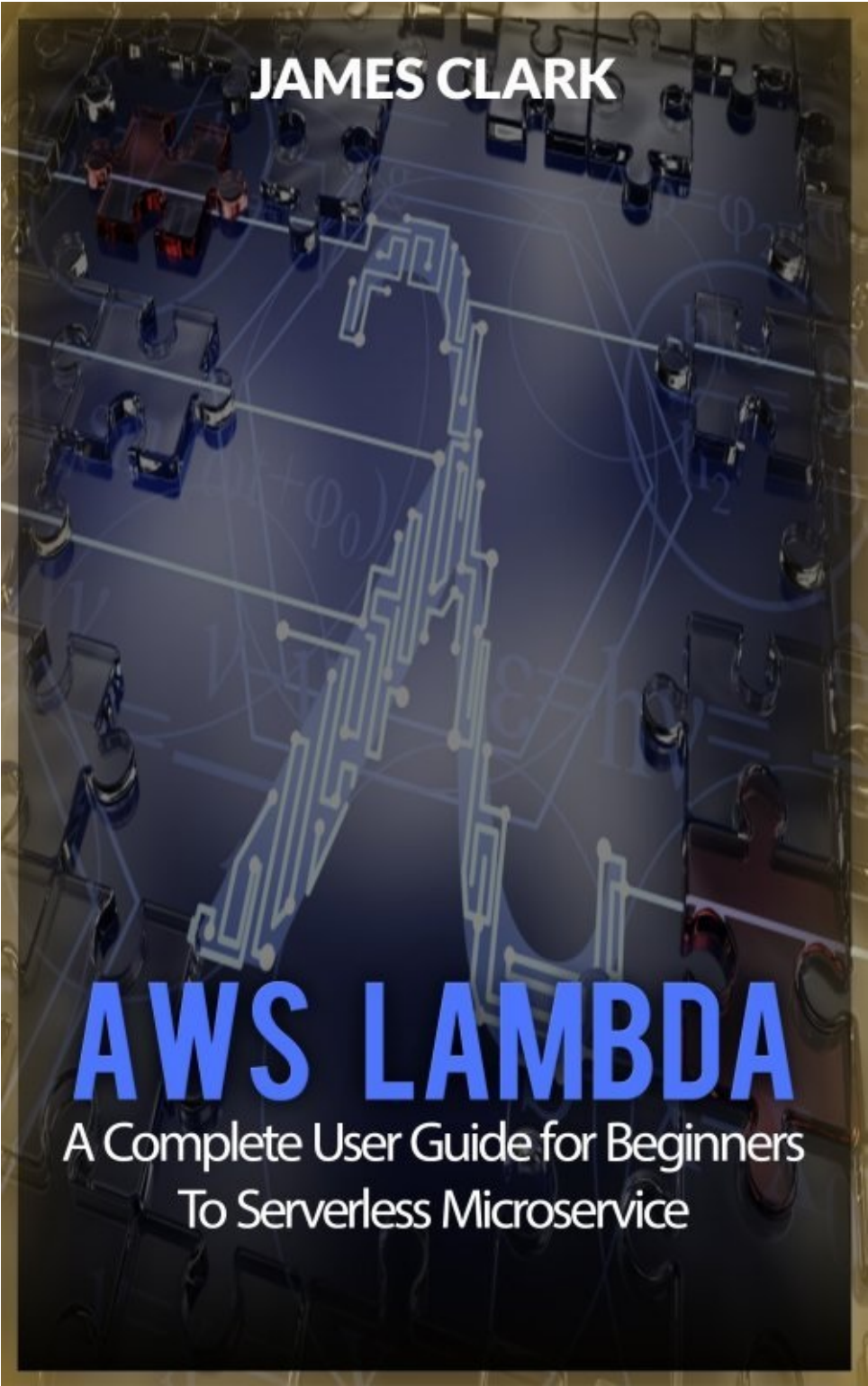
But, these few disadvantages should not deter from getting this amazing Amazon Tap from the shops. Actually, it has many advantages than its demerits.

CONCLUSION

I hope this book has provided you with the necessary information pertaining the usage and advantages of having an Amazon Tap with you.

The entire book entails step by step measures regarding this amazing product from the Amazon Company.

It is my wish that you try out the guidelines given in the book to make well use of the Tap.



JAMES CLARK

AWS LAMBDA

A Complete User Guide for Beginners
To Serverless Microservice

AWS Lambda

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by James Clark

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Introduction

Launched in 2014, Amazon Web Services (AWS) Lambda has been described as a master stroke by the ubiquitous empire of Bezos. But what is it? What is it used for?

Broadly speaking, it is a tool allowing developers to upload code that will run on demand without requiring her to maintain the cumbersome infrastructure that comes from running a large application on a server.

Part of the growing field of microservices, Lambda allows people who already use a number of Amazon's other cloud-based web services such as S3 buckets, Kinesis stream and SNS notification to better integrate and get the most out of these tools.

If that paragraph made little to no sense to you, then this is the guide you are looking for young padawan. We will be looking not only at some of the specifics of what AWS Lambda has to offer but we will also spend time helping you to understand just what a microservice is and why you might want to start using them instead of the more traditional, monolithic server model.

Rather than loosely throwing around terms that you may or may not be familiar with, the guide will include a lengthy glossary to help keep you from getting lost in the jargon as well as a resource guide to help you learn more and even get certified in the ways of Lambda.

Let's get started.

Chapter 1 – Micro-what?

Micro-what?

Since AWS Lambda can be described as a microservices tool and platform, let's try to wrap our heads around exactly what a microservice is first.

Adrian Cockcroft, former Director of Web Engineering at media giant Netflix once defined microservices as:

“...a microservices architecture is a service-oriented architecture composed of loosely coupled elements that have bounded contexts.”

Again, if you are new to the world of microservices, the above definition may not do much to help you understand what is going on. A less opaque definition might be:

“A small application designed for a specific function that is constructed in such a way that its parts are kept separate from the others, allowing them to be updated individually without having to write an update for a full-size app.”

Or more simply still:

“Microservices are small apps that can be updated and altered independently without affecting the whole.”

Microservices as a term first gained a significant amount of traction back in 2014. The idea, however had been around for much longer than that. Predating this term was another known as Services Oriented Architecture (SOA) which functions in a similar, though not identical way.

As a matter of fact, there is some debate as to whether or not Microservices are just SOA by another name or whether they are a subset of SOA or if they truly deserve their own designation. For our purposes here, we'll simply treat them as a separate entity.

There are a number of advantages to this type of architecture. These include:

- Scalability – These bits of code can scale up or down based on demand, with different

copies of the same code running parallel with each other each time the relevant command is given.

- Updating – Given how quickly technology is changing and the fickle tastes of the consumer market, being able to update your software quickly is a must. To that end, microservices allow you to update only what needs updating without having a need to weed through the massive amounts of code associated with the monolith architecture.

Related to this is the fact that it is easy to try a new service or function. Simply develop the new code and implement it. Even if it does not work, due to the modular nature of the architecture, a bad piece of code in one module won't prevent the others from doing their jobs.

- Security and fault isolation – This is another benefit of the modular nature of microservices. If a given set of code is corrupted or compromised, it is sufficiently isolated from the others that the larger app will not be affected.
- Team development – Using microservices, small teams can be assigned different modules to work on without being concerned about what the other teams are doing.
- Ease and speed of development – Because microservices are...micro, they can be built quickly, moving from concept, to testing, to full implementation in a very short period of time, allowing developers to respond to and even anticipate trends,

With all of these benefits, you may well be wondering why on earth everyone hasn't switched to microservices. Simply put, there are as many drawbacks as there are benefits.

- Coordination – Having a number of microservices as part of your larger app, means that they all need to coordinate and present the same user interface. If the larger app gets to be quite large, coordinating all of its different functions can quickly become a

nightmare.

- **Testing** – This is a downside of the compartmentalization of microservices. Essentially, each one has to be tested separately. This is much more cumbersome than performing a single test on a monolithic architecture.
- **Overhead** – With your microservices sprawling all over the place, keeping track of all of them can be extremely difficult. Also, because they are so modular, they cannot share the same database. That means you have to do things like construct a separate database for each module.

Each database will likely be relatively small, but there still be a significant level of redundancy in this model. And of course, this can drive up the overall cost as well if you are not careful.

Who Uses Microservices?

Alright, so we have an idea of what microservices are and why a person may or may not want to use them. So who does use them? And what for?

Users of microservices include but are certainly not limited to the following:

- **Netflix** – The media streaming giant was one of the earliest adopters.
- **Amazon** – Other than the obvious presence of their Lambda software, Amazon got some attention a few years earlier for making the switch to microservices.
- **Soundcloud** – The music app made the move and has been happy with it since. Executive Paul Calcado even wrote a series of articles describing his company's positive experience with microservices.

- REA Group – An Australian real estate group that replaced their old monolith architecture with 60 microservices.
- Mobile Apps – Microservices are integral to the growing world of mobile computing. Among other things, they allow apps to better integrate with social media apps to share and like as much as we wish with very little fuss.

As you can see, there are a number of companies both big and small that are making use of microservices with great success.

Chapter 2 – Learning the Lingo. Or Welcome to Jargon Central

Now that we hopefully have a bit of a handle on just what microservices are, it is time to define a few more terms before moving into a discussion of Lambda itself. If you are already familiar with the terminology, feel free to skip this section.

However, if you are new to all of this, this section will help you be better able to make sense of the discussion that follows and provide a useful reference should you continue with further learning.

Application Program Interface (API) – This is a set of routines and tools that specify how different parts of the software should intersect with each other. This is used by developers when programming their graphical user interface (GUI).

Representational State Transfer (REST) – REST is a software architecture used in the development of cloud-based APIs.

IaaS – Infrastructure as a Service is one of the big three models of cloud computing and operates by providing virtualized hardware as a resource. This means that there is no single server or other piece of hardware that does the required work. Requests are filled using parts of actual hardware across a number of networks. The other two models are discussed below.

PaaS – Platform as a Service provides hardware and software to users so that they don't have to maintain the cumbersome hardware infrastructure themselves in order to develop new applications.

SaaS – Software as a Service is a means by which users do not actually download a program to their computer but rather subscribe to it and run it from the cloud. This has become a fast growing sector and includes such major programs as Quicken and

Photoshop, both of which have moved to a cloud-based delivery system in recent years.

Development and Operations (DevOps) – This is actually a cultural movement with the industry. It refers simply to an emphasis on collaboration amongst software engineers on the development of a product from the initial design to the inevitable tech support once the given product has been on the market long enough for users to find all of the problems with it.

NoOps – The idea that IT functions can actually become so automated that they don't need a dedicated team of people to manage them. Yes, the idea that technology is literally taking the jobs of the people that invent it.

Containers – These allow users to run apps in an isolated environment, allowing a greater amount of flexibility in applications.

Latency – This is the time from the input of data or a given command until the desired outcome or output is achieved. Or in simpler terms, the amount of time to get your program to do what you want it to do.

Scalability – A piece of software that is scalable will easily be able to handle the fluctuating demands on its system that are sadly inevitable, whether the demand is high or not, the software will be able to handle and adapt to the different demands places on it.

Monolithic Architecture – This is a self-contained, all-inclusive software that is centered around having all of the code in one central location, usually on site if at all possible. There is no or very little modularity to give such software the kind of flexibility that is highly desired these days.

Bi-modal IT – While this term certainly sounds impressive, it is really nothing more than IT professionals taking a both/and approach to software. That is, they are willing and able to use and develop traditional and thus stable software while also being able to work with and develop newer, more agile applications.

Statelessness – If a given app or service is stateless, it does not remember what you did the last time you used it. This has obvious disadvantages but the main advantage is that you do not need to write (or run) the code necessary to “maintain state.” This also allows your microservices code to run over a number of different servers.

Internet of Things – This term is one of the many in the technology world that get thrown around frequently while hardly ever being defined. The best definition is that it is a catch all term referring to all of the various object these days from phones, to thermostats, to ovens to cordless drills that have some sort of network connectivity and can send and receive data from one to the other.

NoSQL – Not only SQL is a database architecture designed to solve problems that other architectures weren’t made to handle, and especially useful for accessing the unstructured data stored throughout the cloud.

Having taken the time to define some of the terms you will be running into while learning about AWS Lambda, we’ll now take a bit more time to briefly introduce you to some of Amazon’s other web services as one of the best features of Lambda is how easily it makes it to integrate these different services and so streamline all of your operations. Events in all of the below can trigger Lambda code for further operations.

Amazon Simple Storage Service (S3) – This is Amazon’s highly secure and scalable cloud storage feature. It offers different storage tiers as well, based on how frequently one intends to access the data.

AWS Internet of Things (IOT) – This bit of software allows many different devices to connect with cloud-based applications in a secure manner. The platform can literally support billions of devices.

AWS DynamoDB – This service allows for the storage of documents and databases that are used frequently, in contrast to the S3 services defined above.

AWS Kinesis – Kinesis allows you to collect, store, analyze and process the terabytes per hour of data that can be generated by various streaming services and applications. Kinesis also allows you to develop your own streaming apps.

Amazon Simple Notification Service (SNS) – Using Amazon's SNS, you are able to send messages to apps and users instantly.

It is possible to send directly to one user or to many at once as is desired. And you can do this from any number of platforms, including but not limited to iOS, Android, Java, PHP, and more.

AWS CloudWatch – This is a great analytics tool for those who make good use of Amazon's many web services.

It allows you to track various metrics and monitor your files. You can also create automatic actions to respond changes in your Amazon resources.

Chapter 3 – AWS Lambda (Finally!)

Now that we have spent all of this precious time making sure that we have grasp of the language involved, we can talk a little bit about Lambda itself. In short, Lambda allows you to upload various kinds of code to analyze, process, and integrate data from the rest of the AWS ecosystem.

It can do this by responding to notifications from those other services described above and based on external timers, allowing the processes to be scheduled automatically.

The best part is that you do not have to worry about managing servers, scaling or anything of that nature. All of the administrative overhead is taken care of automatically by Lambda.

Also, don't worry, Lambda does not require learning a unique code language as it is written in the widely available and popular JavaScript and Java.

Because there are no servers, you do not pay to rent server space. Rather you pay for runtime, with Amazon charging you for every 100ms that the code runs. Naturally, that can add up, but given the number of companies, large and small that have begun to use this web service, it seems highly likely that the cost/benefit is worth it.

The favorable cost/benefit ratio is not only due to not having to rent server space whether you are using it or not. It is also because being able to perform actions automatically saves a great deal of time and effort.

For example, The Seattle Times makes use of Lambda and other services like S3 to immediately process data. This allows them to almost instantly thumbnail and resize images for a number of different devices, including desktops, tablets and smartphones. If you have ever tried to do this by hand, you know that it can be a frustrating and time consuming process.

Lambda also interacts with Kinesis to process real-time data to track application activity, order processing and social media analysis. Companies such as Localytics use it to process literally

billions of data points in real-time, providing the most up-to-date analysis possible for their clients.

What about sorting and filtering data? Lambda works with Kinesis and DynamoDB to do this and more, making it highly useful for search applications. One of the biggest is the real-estate giant Zillow. If you have even casually searched for a home in the last five to ten years, chances are that you have used Zillow (probably on your phone), which means even the least technologically astute of us have directly benefited from Lambda's code.

AWS Lambda has also proven invaluable for analyzing data from the Internet of Things and developing many backend operations and processes for mobile and web applications. Again, if you have a smartphone, you have already been making use of this technology already.

But isn't it just like...?

One thing that many have noticed about AWS Lambda is that it bears a lot of similarity to some of the services already offered by Amazon, particularly EC2 (Elastic Compute Cloud) and Elastic Beanstalk.

EC2 is designed to make cloud computing easy by providing resizable compute capacity. In other words, it provides simple scalability, just as Lambda does.

EC2 however, requires the user to make extensive use of Virtual Machines (VMs) before uploading any code, meaning that there is still quite a bit of work for a developer to do. Lambda allows you to just upload the simple code and skip any VM management whatsoever.

Similar to EC2 is Amazon's EC2 container service, which basically does the same thing but trades VMs for containers. And again, Lambda removes the need for developing and maintaining the various containers and simply focus on the function code.

Elastic Beanstalk is a service allowing for the deployment and scaling of web apps and services developed with Java. You will note that again, this is similar to the purpose of Lambda.

Being a PaaS though, it still requires developers to push code along and also results in much of the code being exposed as a webpage or REST endpoint. Lambda by contrast cannot be accessed from the public internet, making it much more secure. At least a hacker has to work for it in order to mess around with your code.

What does it look like?

To help developers learn and understand more about how Lambda works, Amazon provides sample code for various functions and also provides instructions on how to run and test the examples given.

Here, we'll reprint some of that sample code for using Lambda in real-time file processing so that if you are new to coding in general, you can get an idea of what

	<code>var AWS = require('aws-sdk');</code>
	<code>var marked = require('marked');</code>
	<code>var async = require('async');</code>
	<code>var s3 = new AWS.S3();</code>
	<code>function getSNSMessageObject(msgString) {</code>
	<code> var x = msgString.replace(/\\g, "');</code>
	<code> var y = x.substring(1, x.length - 1);</code>
	<code> var z = JSON.parse(y);</code>
	<code> return z;</code>
	<code>}</code>
	<code>exports.handler = function (event, context) {</code>
	<code> console.log('event: ' + JSON.stringify(event));</code>
	<code> var snsMsgString = JSON.stringify(event.Records[0].Sns.Message);</code>
	<code> var snsMsgObject = getSNSMessageObject(snsMsgString);</code>
	<code> var obj = {</code>
	<code> 'bucket': snsMsgObject.Records[0].s3.bucket.name,</code>
	<code> 'bucketOut': String(snsMsgObject.Records[0].s3.bucket.name + "-out"),</code>
	<code> 'key': snsMsgObject.Records[0].s3.object.key,</code>
	<code> };</code>
	<code> async.waterfall([</code>
	<code> function download(next) {</code>

```
// get Markdown object
```

```
s3.getObject({
```

```
{
```

```
  Bucket: obj.bucket,
```

```
  Key: obj.key
```

```
},
```

```
next);
```

```
},
```

```
function transform(response, next) {
```

```
  // convert md -> html
```

```
  var data = marked(String(response.Body));
```

```
  next(null, data);
```

```
},
```

```
function upload(data, next) {
```

```
  // change file extension
```

```
  var newFileName = obj.key.split(".")[0] + ".html";
```

```
  console.log("Uploading data to: " + obj.bucketOut);
```

```
s3.putObject({
```

```
{
```

```
  Bucket: obj.bucketOut,
```

```
  Key: newFileName,
```

```
  Body: data,
```

```
  ContentType: "text/html" // set contentType as HTML
```

```
},
```

```
next);
```

```
}
```

```
], function (err) {
```

```
  if (err) {
```

```
    console.error(err);
```

```
  } else {
```

```
    console.log('Success');
```

```
  }
```

```
context.done();
```

	});
	};

If you are an experienced coder, this bit of code is quite simple. However, if you are brand new, it no doubt looks pretty daunting. Don't worry though, there is plenty of training available to help get you up to speed. We'll be looking at that shortly.

Some other important things to know about Lambda:

- It only works in the AWS ecosystem. So you can't go cafeteria style and make it work with your favorite programs from other sources that don't make use of AWS. AWS is much like Apple in that way. Some products can only be used in conjunction with their own products while others work fine on their own.
The only way to get the most out of any one product though is to go all in on the ecosystem and conduct all of your related business within the given boundaries. It works great so long as you understand that going in and are prepared to do the work of migrating any operations currently running in another ecosystem into AWS.
- Lambda is really, really fast. Your code is literally executed in milliseconds.
- You can add multiple functions to a single source. That means that the same event from Kinesis (or other AWS service) can trigger more than one function.

Who is using Lambda?

There are a number of businesses developing software that integrates with Lambda. Among them are:

- Algorithmia – A marketplace for algorithms, providing access to algorithms in five lines of code or less.
- Twilio – Twilio creates API platforms that are used to enable users to make and receive phone calls from mobile applications.
- CloudBees – Providing continuous delivery solutions, CloudBees helps meet the security

and scalability needs of many businesses.

- **Codeship** – Codeship is another continuous delivery service, integrating with GitHub and BitBucket to notify you when tests or deployments have failed.
- **Zapier** – This allows you integrate Lambda functions into many already existing apps.
- **Loggly** – Integrating with Lambda and CloudWatch, Loggly provides real-time data mining and analysis.
- **Splunk** – Another data-analysis tool, Splunk works with Lambda to provide an enterprise-wide view of the vast amounts of data generated by any number of applications.
- **Sumo Logic** – This cloud-native platform allows you to monitor and manage the health of all Lambda functions.
- **Mitoc Group** – Creator of the Digital Enterprise End-to-end Platform (DEEP) Marketplace, Mitoc allows customers to choose and deploy custom microapplications.
- **Datadog** – Allows for the monitoring of all your AWS services in real-time.

There is a good chance that if you are reading this guide, you may not have ever heard of these companies but there is an equally good chance that they are already directly or indirectly affecting your life in numerous ways, operating in the background of your workplace or your favorite apps on your smartphone.

Chapter 4 – Learning More

As you can see, Lambda and the other AWS services are becoming more and more important in the world today and as mobile computing continues to grow in importance (it already accounts for most of our time on the internet) AWS will only continue to grow increase in prominence. Naturally this means that career opportunities will also grow in relation to it and that means needing to get certified. And that means training.

Cloud Academy is once place where you can go to learn, practice and prepare for your AWS certification. They get you working with hands on labs so that you can learn and utilize the coding skills necessary to get the most from Amazon's suite of services, including Lambda.

Video courses help you learn and master the content as well, walking you through how to write various functions and build up your knowledge so you can take the labs further.

Cloud Academy also helps provide a dedicated learning path to make sure that you have everything you need to knock your AWS Certification Exam out of the park. And don't worry if you are just a beginner. You can take the Basic, Intermediate, or Advanced exam, whatever is the most appropriate for your skill level.

Naturally, the IT world is continuously changing and what you learned yesterday may be irrelevant in a year. To that end, Cloud Academy provides continuous, professional training taught by industry experts to make sure that you are able to stay on top of the industry and the most out of AWS for years to come.

Plans range from low-cost individual plans to enterprise plans that allow companies to train their entire IT team.

Lynda.com also provides many helpful training courses in AWS, from general training to specific subjects like enterprise security and data services. While these are not certifications, Lynda is a recognized source of training for numerous technology related issues.

You are able to preview their courses for free and then choose to sign up for the trial. If you work at it you might be able to get your course completed before the trial is over. Just saying.

Global Knowledge also provides certification prep, offering training for certifications in Solutions Architect, Developer, and Sysops Administrator.

Amazon itself provides a number of resources to help prepare for certification exams in a number of AWS disciplines. Workshops, exam guides, sample questions, and even practice exams are all available at aws.amazon.com. Beyond that are labs and paths for recertification, which is necessary every two years. Fortunately, they set it up for the overly business individual and will send out notifications six months in advance.

To give you an idea of what you need to know, here are some of the basic things a person should know before taking the exam for AWS Certified Solutions Architect, taken from Amazon's exam guide for the same:

AWS Knowledge

- You will need to have first-hand experience of various AWS services, including those involving networks, databases and more.
- Experience with large distributed systems.
- A solid understanding of scalability and elasticity.
- The relationship between AWS and networking technologies.
- A solid understanding of scalability and elasticity.
- Understanding of the AWS's security features.
- How to make AWS's various services interact with each other.
- How to make AWS's various services interact with each other.

General Knowledge

- Understanding the use and development of things like caching, application and web services.
- RDBMS (MySQL, Oracle, SQL Server), NoSQL
- More than a passing knowledge of loose coupling and stateless systems.
- First-hand knowledge of CDN.
- Networking experience including HTTP, DNS and firewalls.
- Knowledge of RESTful Web Services, XML, JSON.
- Knowing the general development cycle for software.
- Solid knowledge of information security.

Chapter 5 – What do Users Say?

All of the above is nice, but is it really worth going through all of the work to get certified in AWS in order to get a job in the field? Or if you already are employed by a company looking to go the microservice route, is Lambda the best solution? To put it another way, what are real people saying about the product?

Going to G2 Crowd, a respected software reviewing platform reveals that actual users are very happy with the product. Here are just a few comments.

If you want to go serverless and need AWS as your infrastructure than AWS Lambda is an option for you. It can easily work with other AWS services like NoSQL, Stream etc
– Murtaza K, IT Consultant for YASH technologies.

For us, it is being able to run code without having to run servers and other infrastructure. This allowed us to use the server for something else and the Lambda costs is fractions of a penny!

– Dave N. Software Admin commenting on the benefits provided by using lambda at Signiant.

AWS Lambda is the future.

– Marc S, Information Services at The State Capital Title and Abstract Company.
Clearly he is impressed.

I have been using AWS Lambda for the past one year and I am loving it. We combine CloudWatch Events with Lambda to run the functions automated like a cron and I really like that feature.

– Milon J, Computer Software at QBurst remarking on what he likes best about Lambda.

The benefits have been numerous. I don't spend any time provisioning EC2 instances, configuring OSes, etc. The service also helps guide the development of the app towards a robust microservice architecture. Finally, Lambda + the API gateway means that one set of functions powers any client, be it Android, iOS, or a browser.

– Ernesto M, IT Admin talking about the benefits realized from using Lambda while working at Gol Labs.

Conclusion

Lambda is the future, a masterstroke from Amazon. Or so say some of those who have used Amazon's microservices tool. As you look around on the web, you will certainly find detractors, not just regarding Lambda, but microservices in general.

However, the vast majority of users have found this new technology to be highly innovative and have experienced many benefits from the integration and low overhead that it offers.

Hopefully, even if you came into this guide wondering if AWS Lambda was a new fraternity, you are leaving with at least some understanding of what it does and how it has come to be used by a number of businesses, including major organizations such as The Seattle Times, Netflix, and even Major League Baseball.

You will have noted that at many points, Lambda's usefulness with regards to mobile computing has been mentioned. This usefulness will only grow as more people come to rely on phones and tablets as their sole source of internet content, meaning that as the market grows, so will career opportunities.

By providing examples of code and what type of knowledge you need in order to pass a certification exam, you should have a jump on others thinking of diving into Lambda coding for the first time.

You can look at the following resource page to learn more about Lambda and microservices and where to get certified.

Resources

The Horse's Mouth - aws.amazon.com

Amazon provides tutorial videos, diagrams, case studies and more to help you get the most out of Lambda and their entire suite of web services. You can also study for and take your certification exams through the site.

Getting Started – [www.Lynda.com](https://www.lynda.com)

If Amazon's material isn't quite getting through to you, try out Lynda.com. They have a free trial and provide high-quality training that should help beginners get a handle on the trickier aspects of the service.

Cloud Academy – www.cloudacademy.com

Cloud Academy provides training given by industry experts in numerous AWS disciplines. The cost can be high but the continuing training offered, as well as the benefit of being part of a community of which you can ask questions more than makes up for it.

Microservices and Netflix - <https://www.nginx.com/blog/microservices-at-netflix-architectural-best-practices/>

This is a good article on the basic benefits of using microservices, benefits enjoyed by Netflix, one the earliest supporters of the architecture.

The Masterstroke - <https://gigaom.com/2015/01/09/why-aws-lambda-is-a-masterstroke-from-amazon/>

A good article comparing Lambda to other AWS services and why the timing for its release was so perfect.

What is a Microservice? - <https://smartbear.com/learn/api-design/what-are-microservices/>

A comprehensive guide on the differences between microservice and monolith architecture.

Reviews - <https://www.g2crowd.com/>

G2 Crowd provides numerous reviews of all of Amazon's Webservices and virtually any other piece of software that you can imagine.

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