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A PATH FOR HORIZING YOUR INNOVATIVE WORK

BACKUP AND RESTORE DATA IN ANDROID

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Abstract

Today, in fastest growing age, Everyone wants to keep their data safe. But Data loss can be a common experience of computer users so need to take back up the data. It also explains different risks of losing the data and how to overcome this. This paper explains different types of backup and it deals with why android needs to back up the data? How android can back up the data? Different available online backup services in android to back up the data.

1. INTRODUCTION

[4] In this world of computing technology, this has become a necessary that one should restore and back up the data from any Smartphone for the reason that technology was invented by human beings and are neither reliable nor consistent. As data is important than smart phone these paper explain different ways of backing up the data stored in Android. When user need to access a document user have stored on a remote server or synchronize data between his/her systems/devices and share important business documents with their clients, they need to have a powerful online backup and sharing solution that backs up our data automatically on a secured cloud storage and make it available when needed. In this paper we review 10 most popular online backup, online sync and online sharing solution for Android.[4]

1.1) what is back up? In information technology, a backup is making copies of data which may be used to *restore* the original after a data loss event. Backups have two distinct purposes. The primary purpose is to recover data after its loss, data deletion or corruption. A 2008 survey found that 66% of respondents had lost files on their home PC. The secondary purpose of backups is to recover data from an earlier time. Backup is the activity of copying files or databases so that will be preserved in case of failure or other catastrophe. [6]

1.2) what is restore? The retrieval of files from backed up process is called *restoring* the data.

2. WHY ANDROID NEEDS TO BACKUP ?

Today's biggest Android security risks and what can be done to mitigate them.

1. AWOL androids: In a Juniper survey, 58% of Smartphone and tablet users feared not being able to recover lost content. Apple iPhone users can restore nearly everything from iTunes, but Androids are not managed through desktop sync. The data loss can be avoid in two ways. First, install an auto backup app to enable quick restoration of all that matters. Second, "find me" services to locate and recover lost devices.

2. Flimsy passwords: If Android falls into the wrong hands, more needed to prevent thieves from stealing broadband service, ringing up SMS fees, reading your email, or abusing VPN connections. Juniper's survey says that, 3 out of 4 users locked their smart phones. Researchers report says Android swipe-lock patterns over 90% of the time. Instead of Androids should be locked with PINs or passwords or third-party lock apps such as Norton Mobile or App Protector. Users may use a remote lock service.

3. Naked data: A major business risk posed by Android is lack of hardware data encryption. Fortunately, Android 3.0 adds an API to let manufacturers offer encryption and IT enforce use. Unfortunately, existing Androids cannot yet perform hardware encryption. Until self-encrypting Androids appear, stored data can be protected in two ways. First, those remote lock apps and APIs can request remote wipe as well, resetting the device to factory defaults but only when reachable, without wiping SD card data. For more rigorous protection, enterprises should scramble sensitive data such as email and contacts using self-encrypted apps.

4. Smashing: This phishing variant uses texting to trick Smartphone users into visiting fraudulent or malicious links. For example, last summer, unlucky SMS recipients were invited to download Trojan-SMS, Android, Fake Player, a free Movie Player. Once installed, without user knowledge, ringing up huge bills. To block costly texts, users can add SMS controls such as SMS Link Guard. Enterprises may consider using a Mobile Device Manager (MDM) that can monitor Android wireless expenses

5. Unsafe surfing: Think web browsing on Android is safe? Last fall, M.J. Keith showed that a known WebKit browser vulnerability could be exploited on Android 2.0 or 2.1. Thomas Cannon reported an Android 2.2 browser flaw that could give hackers full SD card access. Recently, Google fixed an Android Market cross-site scripting (XSS) vulnerability that enables arbitrary code execution, found by John Oberheide. Unfortunately, Android users cannot quickly patch around bugs, because OS updates are deployed infrequently by carriers. Using an app like Bad Link Check or Trend Micro to avoid known-malicious websites.

6. Nosy apps: A whopping 28% of those apps now access device location, while 7.5% access stored contacts. Android apps must request permissions during installation users need to review those requests, exercise caution, and avoid apps that seem too nosy.

7. Repackaged and fraudulent apps: Many repackaged apps found on third-party. Android markets are free apps, repackaged to generate ad revenue. But repackaging is also used to implant Android trojans, such as the Android Pjapps. Trojan & the Android Geinimi Trojan.

8. Android malware: According to traffic analysis, Android malware spike 400% last year. When Co verity assessed the Android kernel, it identified 359 code vulnerabilities, 88 of which posed "high risk" of exploitation. Reason is Android is an open development platform, hackers have good opportunity to find and learn how to take advantage of these kinds of flaws. Fortunately, application sandboxing is built into Android to limit potential damage by malicious apps.

3. TYPES OF BACKUP

3.1 local backup[2]

1) Backing up critical files to diskettes is used by people who keep their checkbooks and personal finance data on the PC. Reconstruct checkbook balances, if hard disk crashes and copy it to a diskette is quick and economical.

2) Backing up to a Zip drive, Jaz, Syquest, or similar hard disks. As good habit once a week or month, back up the files to an alternative storage device, such as a Zip drive. About 45 minutes for the contents of a 500 megabyte hard disk.

3)It is easily removable drive.

3.2 Internet backup

Consider as sending the files to another site for safekeeping. In case of hard disk crashes, download from the safekeeping site. These are some products and services as fallows.

1) Atrieva provides the user with a client program that allows the user to send files being backed up to an Atrieva-designated backup site. One monthly charge entitles you to back up to 25 megabytes.

2) Backup Net sells both a server and a client and is aimed at helping to set up own intranet.

3) Quick Backup is a client program from McAfee Associates. They have a charge for the client and a relatively low monthly charge for storing 30 MB. Quick Backup save as folder or file types.

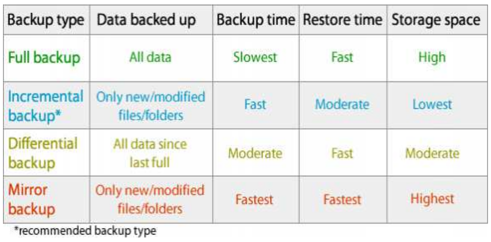
4. DIFFERENT BACKUP METHODS:[7]

4.1full backups: full backup stores all files and folders, frequent full backups result in faster and simpler restore operations. This approach is good when it does not include large amounts of data.

4.2 incremental backups: It stores all files that have changed since the last backup. The advantage of an incremental backup is that it takes the least time to complete and take less disk space. However, during a restore operation, each incremental backup must be processed, which could result in a lengthy restore job. This approach is good when the many files need to back up for all time.

4.3differentialbackup: It contains all files that have changed since the previous full backup. The advantage of a differential backup is that it shortens restore time compared to a full backup or an incremental backup. However, if you perform the differential backup too many times, the size of the differential backup to be larger than the baseline full backup. It intermediate between the first two methods. It is also good when the conditions are intermediate. (2)

4.4 mirror backups: Mirror backup includes all files that have changed since the last mirror backup, missing files are also be deleted from the backup set. The resulting backup archive consists of either one compressed file or one folder.[7]



Backup type	Data backed up	Backup time	Restore time	Storage space
Full backup	All data	Slowest	Fast	High
Incremental backup*	Only new/modified files/folders	Fast	Moderate	Lowest
Differential backup	All data since last full	Moderate	Fast	Moderate
Mirror backup	Only new/modified files/folders	Fastest	Fastest	Highest

*recommended backup type

Table 4.1 Comparision of backup types

5. HOW TO BACK UP YOUR ANDROID PHONE?[3]

Android doesn't offer a native backup service, before a thief swipes that phone, follow steps.

1) google has your back. Go to Settings then Privacy, and make sure that "Back up my settings" and "Automatic restore" are checked off. Go to Settings in that go to the Accounts and sync, open your Gmail account, and check off all options. With these settings in place, your contacts, system settings, apps, calendar, and e-mail will be restored whenever we set up a new Android phone with that same Gmail account.

2) Photos yet, Google haven't implemented a native photo backup service so take help of third-party apps to safeguard our photos. Photo bucket Mobile will upload newly snapped photos in the background to our Photo bucket account automatically. FlickrCompanion and PicasaTool arefree apps that allow mobile uploading.

3)drag and drop. Connect your phone to the computer through USB, set it in Disk Mode and locate the drive Open the drive, find the DCIM folder, and drag the photos we'd like to back up onto hard drive.

4) Text messages. Folks at SMS Backup figured out a smart way to back up text messages in the cloud."

6. THE DIFFERENT WAYS OF BACKING UP THE DATA STORED IN YOUR ANDROID

- **Sprite backup: [7]** This provides a complete and full back up of the data stored on the Android devices, which include contacts, sms, applications, settings more. Besides, this is possible to set up Schedule Back up silently to protect data 24/7.

- **Titanium backup:** This is one of the favorite and the most widely used backup software for Android, which does a similar job like other back up softwares. However, this software is useful only for those customers who have rooted devices, which means user need to have some technical knowledge and is not user friendly like the other two softwares. The major advantage of this software is that this will enable to restore the Market links so that the applications can be updated in the downloaded pages of the market without any hassles. This is also possible to restore Wi-Fi accessibility using the point data.

Some of the features that can back up using this software will include contacts, call log, system settings, home screens sms, music playlists, and many more. It is a very powerful Real time backup that comes for sale in two versions, a free one with limited features and a full version costing $5.90 in the Android market.

•**my backup pro**: This is easy to use backup software that comes with a systematic wizard to guide you through the entire process. The software does the job of backing up the data to either their own server or to your SD card, when you plan to switch phones. Some of the features that this software backs up will include contacts, sms, Home screens, music playlists, call log and many more. What makes this attractive is that this has an easy to use interface and accuracy with the backup restores function that will suit your needs and works on all phones, both rooted and non-rooted phones.

7.FREE ONLINE BACKUP SERVICES

When document need to access. The following web services are available.

1. Dropbox: Dropbox is a Web-based file hosting service that uses cloud computing to enable users to store and share files and folders with others across the Internet using file synchronization. Dropbox offers a relatively large number of user clients across a variety of desktop and mobile operating systems like Android, Windows Phone 7, iPhone, iPad and BlackBerry.

2. Spideroak: Spider Oak provides an easy, secure and consolidated free online backup, sync, sharing, and access & storage solution for Windows, Mac OS X, and Linux. It has mobile clients for iOS and Android

3. Sugar sync: Sugar Sync's online backup, file sync, and sharing service makes it easy to stay connected. With Sugar Sync user get secure cloud storage for all the files as documents, music, photos, and videos**.**

4. Wuala: Wuala is an online storage, synchronization, and backup service. Data is stored on Wuala's own servers as well as 'in the cloud'. Data in the cloud is stored as encrypted blocks, & in multiple copies. It supports Windows, Mac, Linux, and Mobile like iPhone and Android.

5. Zumodrive: Zumo Drive is cloud-based file synchronization and storage service that enables users to store and sync files online and between computers using their HybridCloud storage solution. Zumo Drive has a cross-platform client for Windows, Mac, Linux, iOS, Android, and Palm webOS.

6. Tonido: Tonido allows to access and share content directly through a web browser without uploading or worrying about storage limits. Using this user can share files, music, photos and calendar, download torrents and even manage finances straight from PC. It is available for all the popular mobile platforms.

7. Asus web storage: ASUS Web Storage is a Cloud Storage Service that helps user backup data, sync file between devices and share data to friends. It offers auto data backup for nearly3computers, auto data synchronization, and data sharing amongst others.

8. Soonr: Soon offers simple document organization and file-sharing with automatic backup and access from any Web browser or mobile phone. soonr supports over 800 mobile devices including iPhone, iPad, Android phones and tablets and BlackBerry.

9. Cx (cloud experience): Keeps files in sync across multiple devices. Manages files, photos, calendars and address book.

10. Fiabee: Fiabee products allow to automatically managing all the files distributed across multiple devices. Every time create or edit a file, Fiabee's advanced technology will detect these changes and automatically save them to secure data center.[8]

CONCLUSION:

This paper explains all different ways of data backup in android to avoid risks of lass of data. Also explain Android online backup storage services.

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