

the Availability Digest™

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--- achieving 100% uptime

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The digest of topics on Continuous Availability. More than Business Continuity Planning.
BCP tells you how to *recover* from the effects of downtime.
CA tells you how to *avoid* the effects of downtime.

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Coping with the Lack of Legacy System Documentation

Most organizations depend upon multiple legacy systems for their critical operations. Built before the advent of agile software methodologies, these systems typically were designed in detail before they were built. The design documents – often hundreds of pages long – were never kept up-to-date in order to accommodate application changes. Consequently, such systems are difficult to maintain and to upgrade. Many organizations (including the U.S. government) spend up to 75% of their IT budget maintaining their investment in legacy technology.

Fortunately, help is available. Companies such as CGI (www.cgi.com) provide automated tools to develop technical and architectural documentation for legacy systems. Other vendors, such as Cigniti (www.cigniti.com), offer tools for creating regression test suites even in the absence of documentation so that functional changes can be tested effectively.

A very important class of documentation that is often overlooked is user manuals. Often, a small cadre of employees is responsible for using an application and understanding its intricacies. However, as these people move on or retire, their knowledge moves with them. A well-organized and simple-to-use user manual is the solution to keeping this knowledge available to new employees assigned to the system. This is an area of expertise of which we at the Availability Digest are proud. We have developed many effective user manuals over the years. Please give us a call if you feel that you have such a need.

Dr. Bill Highleyman, Managing Editor

Best Practices

Software Documentation

Back in the 1970s through the 1990s, I ran a software development company, The Sombers Group. We developed real-time, mission-critical software for many large companies, including The New York Stock Exchange, Time, McGraw Hill, General Electric, and the Chicago Transit Authority, among many others.

Back then, real-time systems were by and large programmed in assembly language to get the maximum performance out of the underlying hardware. Unlike today's languages, such as Java and C#, assembly languages and its counterparts were hardly self-documenting. Therefore, a major part of our effort was in software documentation. In fact, it was Sombers' practice to thoroughly design the software *before* we began coding. We then coded according to the design documentation, which could be hundreds of pages long for a major project.

Today, this methodology is known as the Waterfall model. It is being replaced by Agile software development that requires little in the way of formal documentation. Rather, a major software project is defined and delivered periodically in incremental phases that last one to four weeks rather than months or years. In this way, errors can be uncovered early in the project and can be corrected easily. The bulk of the technical documentation is included in the code and employs the facilities of the language being used to implement the project.

User manuals are still required, needed by those who must use the system. This is an area of expertise for us the Availability Digest. We have prepared user manuals for many large companies. Give us a call if you have a need for easy-to-use, efficient user manuals.

[--more--](#)

Availability Topics

The U.S. Government's IT Fossils

Americans won't soon forget the botched launch of Healthcare.gov. The website, intended to support signups for the new Affordable Care Act, came online in October 2013. It quickly failed as it proved to be incapable of handling the subscription load imposed upon it. Eventually, the website became operational with the help of some bright engineers from Google, Oracle, and other Silicon Valley companies.

Healthcare.gov is a modern system that now is performing flawlessly. This is not the case with the bulk of government IT systems. Most are decades old and are experiencing an alarming rate of outages. 75% of the U.S. government's IT budget is spent on maintaining these legacy systems. Even so, several outages occur every month; and some massive outages last into weeks.

The dependence of the United States on outmoded hardware and applications has come to the attention of the U.S. Congress, which has passed legislation allowing it to investigate the state of the government's IT assets. Hopefully, this will lead to funds being made available to replace some of the more mission-critical systems with modern applications and hardware.

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Recommended Reading

Hacktivism

Hacktivism is the act of hacking, or breaking into a computer system, for a politically or socially motivated purpose. The individual who performs an act of hacktivism is said to be a hacktivist. Hacktivists are not cybercriminals. They do not hack into computer systems to steal money or data. Rather, they hack into computer systems - typically websites - to make a statement.

A recent report by Imperva, "Hacker Intelligence Summary Report: The Anatomy of an Anonymous Attack," describes in detail an attempted assault on a website by the hacktivist group 'Anonymous.' The attack lasted 25 days. Though the attack was unsuccessful, the strategy that Anonymous used to perpetrate it was closely analyzed by Imperva and leads to some important strategies to protect a company's computing assets from such attacks.

A key finding is to monitor social media. Since it is the purpose of the hacktivist to make a statement, there often are many mentions of the impending attack on Twitter, Facebook, YouTube, and other social-media forums that can give a company time to prepare.

[--more--](#)

Product Reviews

HPE Helion Private Cloud and Cloud Broker Services

HPE Helion is a complete portfolio of cloud products and services. Helion enables customers to deploy open and secure hybrid cloud solutions that integrate private cloud services, public cloud services, and existing IT assets. Helion is based on the open-source OpenStack cloud. HP was a founding member of the OpenStack Foundation.

HP initially announced that it planned to provide OpenStack public cloud services in twenty of its existing eighty data centers worldwide. However, after announcing its public cloud, HP realized that it could not compete with the giants of the industry, Amazon AWS and Microsoft Azure, in the public cloud space. Therefore, HP (now HPE) sunsetted its Helion public cloud program in January, 2016.

However, HPE provides the Helion CloudSystem, a private cloud. It is delivered as an operable system using HP ProLiant servers. HPE continues to promote its private and hybrid clouds by helping customers build cloud-based applications based on HP Helion OpenStack and the HP Helion Development Platform. It provides interoperability with Amazon AWS and Microsoft Azure.

[--more--](#)

Tweets

@availabilitydig - The Twitter Feed of Outages

A challenge every issue for the Availability Digest is to determine which of the many availability topics out there win coveted status as Digest articles. We always regret not focusing our attention on the topics we bypass.

Now with our Twitter presence, we don't have to feel guilty. This article highlights some of the @availabilitydig tweets that made headlines in recent days.

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