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--- achieving 100% uptime

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The digest of topics on Continuous Availability. More than Business Continuity Planning.
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Are Legacy Systems a Boon or a Shackle?

Many IT services used by enterprises are provided by legacy systems. They are systems that date back decades – often to the 1970s and 1980s. The engineers who created them have long ago retired or passed away. The systems are inflexible and not maintainable. Yet they continue to provide valuable services to organizations.

Legacy systems often prove to be a hindrance to a company's efforts to modernize its IT services. True, legacy systems can be wrapped with software so that they appear to be more modern with a graphical user interface and access to modern-day communication networks. However, it is difficult to add features such as mobile processing to meet the needs of today's users.

A major problem is that the cost and disruption of replacing a legacy system with a modern system prevents many companies from moving in this direction with its applications. Some companies are aggressively pursuing the replacement of their legacy systems, while others prefer to limp along by remaining with them.

Our article, "The Continuing Struggle with Legacy Systems," is an example of the stories we write for the Digest and for others. If you have an article, a case study, or a white paper that you would like written, come talk to us. We also provide consulting and speaking on high-availability topics. We'd be glad to help you.

Dr. Bill Highleyman, Managing Editor

Best Practices

Digest Managing Editor Speaks About Staggered Systems

Dr. Bill Highleyman, Managing Editor of the Availability Digest, spoke recently at the annual NonStop Technical Boot Camp in San Jose, California. He presented two sessions, but the one that attracted the most interest was "Staggered Systems for Improving Mission-Critical System Availability."

Co-presented with Dr. Bruce Holenstein, President and CEO of Gravic Inc., "Staggered Systems" addressed how overall system availability can be improved by staggering system start times in redundant systems.

The presentation was based on a soon-to-be-published two-part paper of the same name. Although the paper includes quite a bit of mathematics, the concepts clearly are explained without the need for math proficiency.

Although "Staggered Systems for Improving Mission-Critical System Availability" will appear in an HPE NonStop-specific publication, its content applies to all mission-critical platforms. Contact editor@availabilitydigest.com for more information about obtaining your copy.

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Availability Topics

The Continuing Struggle with Legacy Systems

What is a legacy system? Is a legacy system defined by age? Is it defined by the fact that something (anything) new has arrived to replace it? Can a legacy system continue to be useful, or are all legacy systems bad?

The legacy systems about which we are talking are decades old, dating back to the 1970s. Several were written in languages no longer supported, such as COBOL. Many of the software engineers that designed and implemented these systems have retired or have passed away. Such legacy systems generally are not maintainable. Yet many are still operational, and they continue to provide useful services.

Numerous legacy systems have been wrapped with modern interfaces to provide graphical user interfaces and access to modern IP networks. However, their core services remain those that were implemented long ago. They are difficult if not impossible to upgrade to provide additional services required by the enterprises using them.

Even with all the drawbacks, it appears that legacy systems are here to stay. Despite their problems with respect to flexibility, maintainability, and usability, they often are simply too difficult or too expensive to replace with modern systems.

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Recommended Reading

The High-Availability Design Spectrum – Part 1

[Editor's Note: In his book "High Availability IT Services," Dr. Terry Critchley lists 23 areas that can have an impact on the availability of IT business services. In this multipart series, and with his permission, we publish his observations. Part 1 of this series reviews his first four reflections in his Parts A through D.]

Dr. Terry Critchley: Most of the documentation on HA/DR I have come across majors on hardware, mainly redundant or fault tolerant, and, to some extent, software. My thesis is that the spectrum of activity needed to design, implement and maintain a high availability business IT system and recover from failures small and large (DR) is much, much greater. Below, I have listed 23 areas (A to W) which can have an impact on the availability of business services which are IT-based. I am sure it will be evident that these areas can have a significant impact on the availability and non-availability of any service or system.

Remember, focusing on availability and focusing on avoidance on non-availability are not the same thing, if you think about it.

The book and chapter references following refer to 'High Availability IT Services':

https://www.crcpress.com/High-Availability-IT-Services/Critchley/9781482255904.

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The Geek Corner

Google Will Help You Manage the 2016 Leap Second

Our day is one rotation of the Earth about its axis. We call this a 'solar day.' We break up the solar day into 24 hours. Each hour contains 3,600 seconds. Each second is timed very accurately by a cesium atomic clock. This timing is used to determine UTC, or Universal Coordinated Time, upon which the world runs.

However, the Earth wobbles. To account for this, one second is added on occasion to the UTC time to synchronize it with the true solar day. This second is called a leap second.

A leap second will be added at the end of 2016. For this coming leap second, Google is here to help. Google runs its own NTP servers and uses them to ease its systems through leap seconds. Rather than adding a second at midnight, Google uses a 'smeared time' technique. Its NTP servers run its clocks 0.0014 percent slower for ten hours before the leap second takes place and for ten hours afterwards.

Google is encouraging everyone to use its NTP servers for free. Users can do this by configuring their network settings to use time.google.com as their NTP server.

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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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