If you know someone who would benefit from being an Insider, feel free to forward this PDF to them so they can sign up here.

Note: As an Insider, you can read all prior Insider newsletters here.

Quick Tips for our Insider friends!

Hey Insiders,

This newsletter is coming to you from Redmond, where we're gearing up for our public classes to start next week. For everyone in the US, I hope you had a great Labor Day holiday!

Talking of classes, Kimberly blogged last week about a **25% discount** for all new students, available for registration made in September – see here for details – and a **50% discount** for anyone repeating a class they attended in the past.

Kimberly also announced her new initiative to provide digital badges (essentially verified credentials you can share) through Credly for all class students from 2012 onward – see here for details of how to get yours. These are very cool!

Are your kids going back to in-person school? Tim and I have been taking orders from parents and teachers for ear-saver mask straps (see here) for kids, teachers, classrooms, schools. We've printed and shipped/donated almost 40,000 between us so far with our seven 3d printers, for anyone that needs them. If you know anyone who could use some free straps, hit me or Tim up in email – don't be shy – I ship in units of 10s and 100s and I'm taking requests for immediate shipment as my request queue is currently empty!

Stay safe and healthy!

SQLskills Classes

Live, ONLINE classes – filling up FAST: our classes this year will all be live-streamed online in September and October, as it's not feasible to run in-person classes for the foreseeable future. We're running them as a series of half-day sessions so it's less onerous then the usual 9-hour days in our in-person classes. Attendees will also get a recording of the entire class – something we've never done before! See here for new student discounts.

- **IE0**: Immersion Event for the Junior/Accidental DBA
  - Half days on 9/14-17 and 9/21-24
- **IEAzure**: Immersion Event on Azure SQL Database, Azure VMs, and Azure Managed Instance

- o   Half days on 9/15-17 and 9/22-24
- **IECAG**: Immersion Event on Clustering and Availability Groups
  - o   Half days on 10/6-8
- **IEPTO1**: Immersion Event on Performance Tuning and Optimization – Part 1
  - o   Half days on 10/5-9 and 10/12-16
- **IEPTO2**: Immersion Event on Performance Tuning and Optimization – Part 2
  - o   Half days on 10/19-23 and 10/26-30

You can get all the details and registration information through the class schedule page here.

Kandio job candidate assessments: we've teamed up with Kandio to produce technical assessments to help companies screen candidates for job recruitment. If you want to make sure someone really knows what they say they know, check out the assessments here.

Online 2019 class recordings: you can buy recordings of all our three-day online classes from 2019, for as little as US$299 each. See here for all the details.

SQLBits: Kimberly, Erin, and I will all be presenting at SQLBits in September. Their precons are:

- Erin: Performance Tuning with Query Store in SQL Server and Azure
- Kimberly: Statistics4Performance: Internals, Analysis, Problem Solving

SQLintersection: The Spring show has been canceled and everything has moved to the Fall show in Las Vegas in December. More details here nearer the time.

Book Review

From the 2014 archives, following from *Command and Control* in the previous newsletter, is David Hoffman's *The Dead Hand: The Untold Story of the Cold War Arms Race and Its Dangerous Legacy*. This book details the hidden Soviet bioweapons programs that existed all the way up to the 90s (anthrax, plague, tularemia, and even smallpox, after it had been eradicate by WHO, for goodness sake!) during the Cold War. The Soviets lied to the world, and Gorbachev and Yeltsin continued to lie after the fall of the USSR in '91. It also explains the 'dead hand' semi-automatic mechanism to allow retaliation by the Soviets after a decapitating nuclear strike against them. Most alarming is the telling of how the a Soviet Union fell apart and left thousands of tons of bioweapons, enriched uranium and plutonium, and nuclear weapons spread across the various republics and Russia without adequate storage, security, and safeguards to stop profiteering and proliferation to rogue states like Iran. Interesting to read about how some parts of the US govt stepped in to buy uranium from Kazakhstan to stop it falling into the wrong hands, and built secure storage for Russia. Well worth reading. Not an alarmist, sensational book at all, but an insightful and level-headed description of what went on. It contains a lot about the

transfer of power to Gorbachev, his meetings with Reagan, and his fall from power that I hadn't read about before either. Highly recommended!

The Curious Case of…

This section of the newsletter explains recent problems we've helped with on client systems; they might be something you're experiencing too.

There was a blog comment a few weeks ago from someone who didn't know that online index operations acquire blocking table locks – they do! You can read through my explanation here…

Ponderings…

(From me this time. As it's a holiday weekend here in the US, I'm re-running a security editorial from exactly five years ago – still completely relevant today – enjoy!)

Back in April 2014 I wrote an editorial in the newsletter focused on security, with my older TechNet Magazine article as a base. As I was reading the book *@War: The Rise of the Military-Internet Complex*, it struck me that security checklists and security reviews of SQL Server environments are all well and good, but there are a few missing things that I think are worth considering.

For instance, does your company provide training or guidance on recognizing and avoiding phishing emails? Phishing is the word describing an email that entices the recipient to open it and maybe click a link, which then installs some malware on the computer. This could be something that logs keystrokes and sends them to another system on the Internet. If a DBA unknowingly installed such malware on a personal laptop, say, and then connected to a work system, the hackers could capture the DBA's login credentials.

Such phishing emails could be cleverly targeted, especially if hackers are going after a specific company and make an email look like it's coming from a source the DBA trusts. The @War book has several descriptions of this being done to companies like banks and defense contractors. You'll likely have received emails like that, purporting to come from Microsoft or PayPal or some other company you recognize, and urging you to click a link to fix something to do with your account.

A way to test people in your company would be to create a fake email with a link that takes them to a web page showing that they've clicked something they shouldn't have and to be wary in future – or just to keep track of what proportion of recipients in the company were fooled into clicking the link.

Another thing to be wary of is social engineering. This is where a hacker calls someone on the phone, pretending to be someone who needs some information that can help them break into a computer system, and fools the person into giving that information out. This wasn't in the @War

book, but is something I've read about being used many times in the past, and is a relatively common technique used by phone scammers.

Finally, one of the things you might consider for your company is engaging the services of a third-party company that does penetration testing. These people will deliberately try to hack into your environment, with your permission, to discover security weaknesses that you can then patch before a malicious hacker tries to break in.

Sometimes this is known as *ethical hacking*, and you can actually learn how to do it yourself. For instance, on Pluralsight (where we host all our online training), there is a new set of courses that will help you learn how to think about security from the attacker's perspective and assess your own environment for security flaws. Check them out here.

Call to Action

If you're responsible for databases that contain any information that you don't want someone to have unauthorized access to, you need to make sure that your security doesn't have any problems. That includes making sure that the users are educated about ways that they can be duped into giving out info or installing malware, and testing your system's defenses to see if they can be broken. You can be sure that someone out there will try to get in sooner or later.

#TBT

(Turn Back Time…) Blog posts we've published since the previous newsletter plus some older resources we've referred to recently that you may find useful.

In this TBT I want to point you at a 30-part blog post series that the team did a few years ago that covers a lot of introductory topics, aimed at accidental/involuntary DBAs. Rather than listing all 30 posts, here is a link to the main page for the series. The series covers these main areas:

- Setup and configuration
- Backups
- Implementing maintenance and security
- Troubleshooting performance
- High availability
- General troubleshooting
- Although the series was aimed at accidental DBAs, these posts are all worth reading to make sure your basic understanding of topics is current and complete.

Here are some of the blog posts since the last newsletter:

- Kimberly: *SQLskills Celebrates 25 Years with 25% Off Fall Courses*
- Kimberly: *SQLskills Adds Verified Credentials and Badging through YourAcclaim!*
- Tim: *Azure SQL Serverless Auto Scale*
- Tim: *Azure SQL Database Serverless Tier*

I hope you find these useful and interesting!

Video Demo

In this Insider video, Tim talks about the benefits from the Resource Provider registration when you self-install SQL Server on Azure Virtual Machines. When you select a gallery image that has SQL Server already installed, you have options for pay-as-you-go licensing, auto-patching, auto-backup, and more. You can now manually register your SQL Server VMs with the SQL Virtual Machine Resource Provider. Microsoft simplifies the registration process by providing PowerShell commands to view registration status and to register your VMs. Unlock feature benefits, free management, and flexible licensing by registering your VM with the SQL VM Resource Provider.

The video is around 7 minutes long and you can get it in WMV format here.

And the demo code is here.

Enjoy!

Upcoming SQLskills Events

Our 2020 classes have moved to be entirely online in September and October and are all open for registration!

You have multiple learning opportunities as every event has a different focus as well as different benefits – from deep-technical training in our Immersion Events to a more broad set of topics at SQLBits / SQLintersection! And, of course, one benefit you'll always get from in-person events is networking; we hope to meet/see you at an event soon!

To help your boss understand the importance of focused, technical training, we've also added a few items to help you justify spending your training dollars with us:

- Letter to your boss explaining why SQLskills training is worthwhile
- So why do you want to come to our training? And the winners are…
- Community blog posts about our classes
- Immersion Event FAQ

LIVE, Online Immersion Events:

Fall 2020

- **IE0**: Immersion Event for the Junior/Accidental DBA
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- **IEAzure**: Immersion Event on Azure SQL Database, Azure VMs, and Azure Managed Instance
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- **IECAG**: Immersion Event on Clustering and Availability Groups
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    - Half days on 10/19-23 and 10/26-30

Click here for the main Immersion Event Calendar page that allows you to drill through to each class for more details and registration links.

Summary

We hope you've enjoyed this issue - we really enjoy putting these together.

If there is anything else you're interested in, we'd love to hear from you - drop us a line.

Thanks,
Paul and Kimberly

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