

Introducing Windows Server 2019 – now available in preview

Microsoft Windows Server Team

This blog post was authored by Erin Chapple, Director of Program Management, Windows Server.

Today is a big day for Windows Server! On behalf of the entire Windows Server team, I am delighted to announce Windows Server 2019 will be generally available in the second half of calendar year 2018. Starting now, you can access the preview build through our [Insiders program](#).

What's new in Windows Server 2019

Windows Server 2019 is built on the strong foundation of Windows Server 2016 – which continues to see great momentum in customer adoption. Windows Server 2016 is the fastest adopted version of Windows Server, ever! We've been busy since its launch at Ignite 2016 drawing insights from your feedback and product telemetry to make this release even better.

We also spent a lot of time with customers to understand the future challenges and where the industry is going. Four themes were consistent – Hybrid, Security, Application Platform, and Hyper-converged infrastructure. We bring numerous innovations on these four themes in Windows Server 2019.

Hybrid cloud scenarios:

We know that the move to the cloud is a journey and often, a hybrid approach, one that combines on-premises and cloud environments working together, is what makes sense to our customers. Extending Active Directory, synchronizing file servers, and backup in the cloud are just a few examples of what customers are already doing today to extend their datacenters to the public cloud. In addition, a hybrid approach also allows for apps running on-premises to take advantage of innovation in the cloud such as Artificial Intelligence and

IoT. Hybrid cloud enables a future-proof, long-term approach – which is exactly why we see it playing a central role in cloud strategies for the [foreseeable future](#).

At Ignite in September 2017, we announced the Technical Preview of [Project Honolulu](#) – our reimagined experience for management of Windows and Windows Server. Project Honolulu is a flexible, lightweight browser-based locally-deployed platform and a solution for management scenarios. One of our goals with Project Honolulu is to make it simpler and easier to connect existing deployments of Windows Server to Azure services. With Windows Server 2019 and Project Honolulu, customers will be able to easily integrate Azure services such as Azure Backup, Azure File Sync, disaster recovery, and much more so they will be able to leverage these Azure services without disrupting their applications and infrastructure.

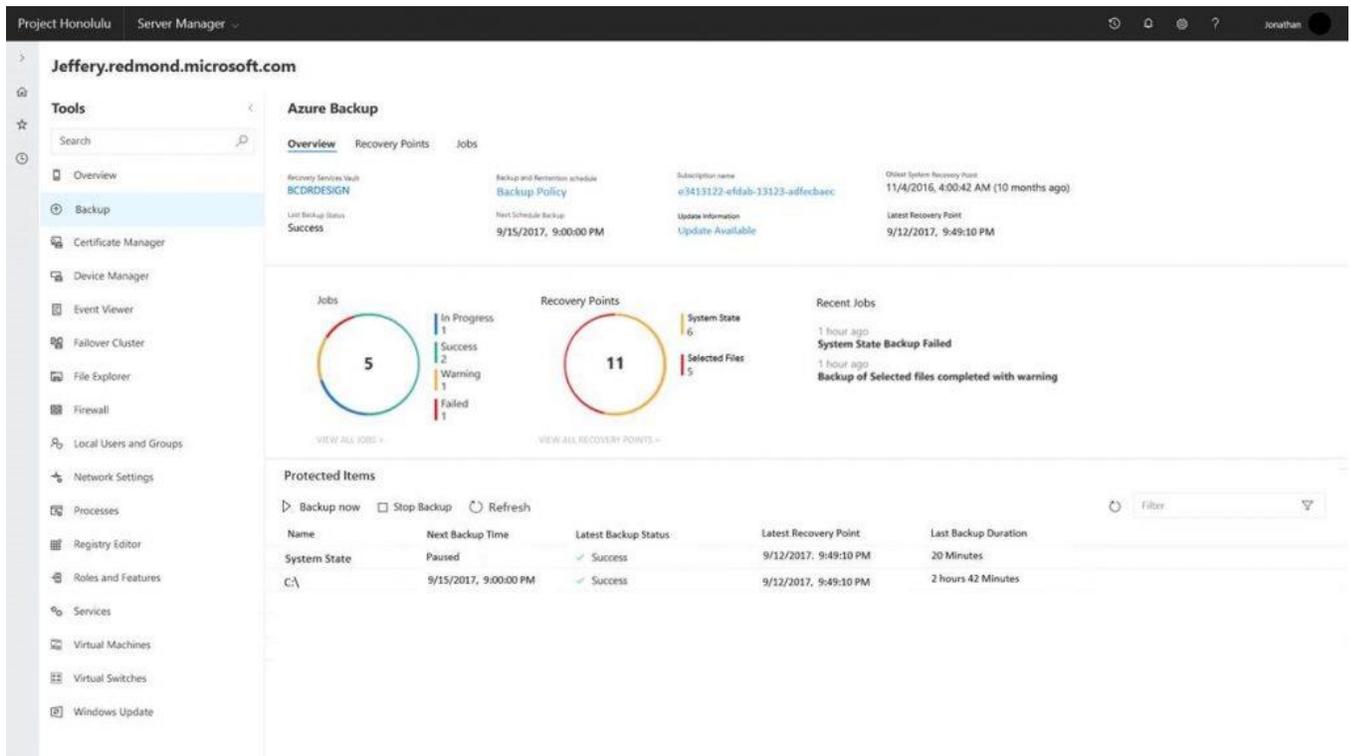


Figure 1: Project Honolulu's management dashboard for Azure Backup in Windows Server 2019 Preview

Security:

Security continues to be a top priority for our customers. The number of cyber-security incidents continue to grow, and the impact of these incidents is escalating quickly. A

Microsoft study shows that attackers take, on average, just [24-48 hours to penetrate an environment](#) after infecting the first machine. In addition, attackers can stay in the penetrated environment – without being noticed – for [up to 99 days](#) on average, according to a report by FireEye/Mandiant. We continue on our journey to help our customers improve their security posture by working on features that bring together learnings from running global-scale datacenters for Microsoft Azure, Office 365, and several other online services.

Our approach to security is three-fold – Protect, Detect and Respond. We bring security features in all three areas in Windows Server 2019.

On the Protect front, we introduced Shielded VMs in Windows Server 2016, which was enthusiastically received by our customers. Shielded VMs protect virtual machines (VM) from compromised or malicious administrators in the fabric so only VM admins can access it on known, healthy, and attested guarded fabric. In Windows Server 2019, Shielded VMs will now support Linux VMs. We are also extending VMConnect to improve troubleshooting of Shielded VMs for Windows Server and Linux. We are adding Encrypted Networks that will let admins encrypt network segments, with a flip of a switch to protect the network layer between servers.

On the Detect and Respond front, in Windows Server 2019, we are embedding Windows Defender Advanced Threat Protection (ATP) that provides preventative protection, detects attacks and zero-day exploits among other capabilities, into the operating system. This gives customers access to deep kernel and memory sensors, improving performance and anti-tampering, and enabling response actions on server machines.

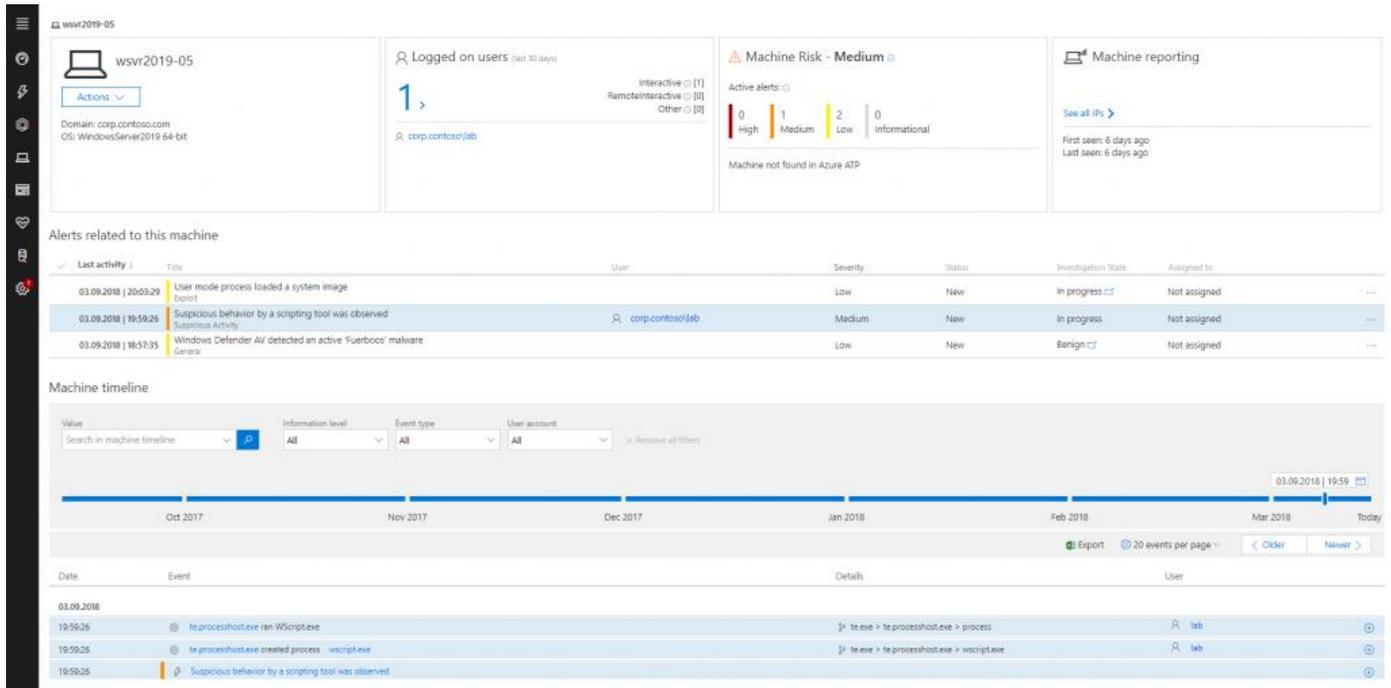


Figure 2: Windows Defender ATP securing a machine running Windows Server 2019 Preview

Application Platform:

A key guiding principle for us on the Windows Server team is a relentless focus on the developer experience. Two key aspects to call out for the developer community are improvements to Windows Server containers and Windows Subsystem on Linux (WSL).

Since the introduction of containers in Windows Server 2016, we have seen great momentum in its adoption. Tens of millions of container images have been downloaded from the Docker Hub. The team learned from feedback that a smaller container image size will significantly improve experience of developers and IT Pros who are modernizing their existing applications using containers. In Windows Server 2019, our goal is to reduce the Server Core base container image to a third of its current size of 5 GB. This will reduce download time of the image by 72%, further optimizing the development time and performance.

We are also continuing to improve the choices available when it comes to orchestrating Windows Server container deployments. [Kubernetes support is currently in beta](#), and in Windows Server 2019, we are introducing significant improvements to compute, storage, and networking components of a Kubernetes cluster.

A feedback we constantly hear from developers is the complexity in navigating environments with Linux and Windows deployments. To address that, we previously

extended [Windows Subsystem on Linux \(WSL\) into insider builds for Windows Server](#), so that customers can run Linux containers side-by-side with Windows containers on a Windows Server. In Windows Server 2019, we are continuing on this journey to improve WSL, helping Linux users bring their scripts to Windows while using industry standards like OpenSSH, Curl & Tar.

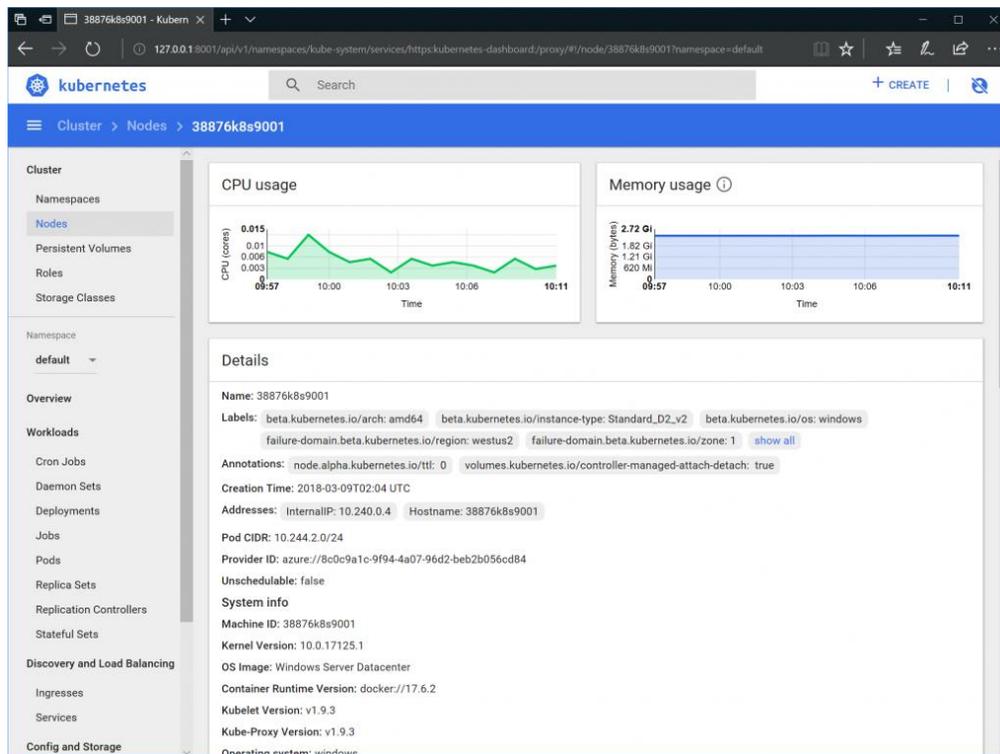


Figure 3: Kubernetes managing a container host running Windows Server 2019 Preview

Hyper-converged infrastructure (HCI)

Hyper-converged infrastructure (HCI): HCI is one of the latest trends in the server industry today. According to IDC, the [HCI market grew 64%](#) in 2016 and Gartner says it will be a [\\$5 billion market](#) by 2019. This trend is primarily because customers understand the value of using x86 servers with high performant local disks to run their compute and storage needs at the same time. In addition, HCI gives the flexibility to easily scale such deployments.

Customers looking for HCI solutions can use Windows Server 2016 and the [Windows Server Software Defined](#) program today. We partnered with industry leading hardware vendors to provide an affordable and yet extremely robust HCI solution with validated design. In Windows Server 2019 we are building on this platform by adding scale, performance, and reliability. We are also adding the ability to manage HCI deployments in Project Honolulu, to simplify the management and day-to-day activities on HCI environments.

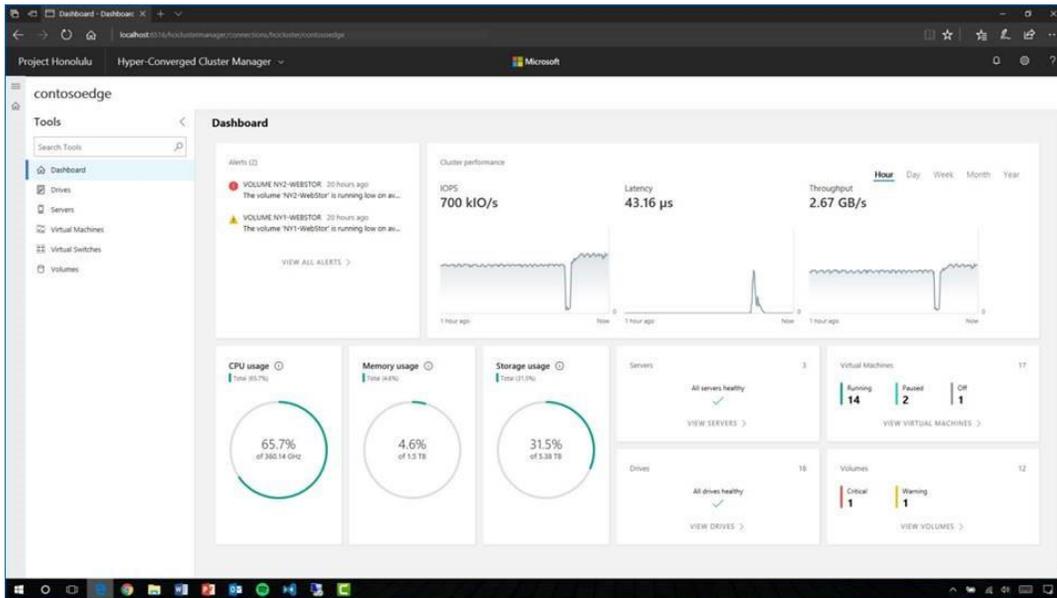


Figure 4: Project Honolulu's Hyper-converged infrastructure (HCI) management dashboard in Windows Server 2019 Preview

Finally, Windows Server customers using System Center will be excited to know that System Center 2019 is coming and will support Windows Server 2019.

We have much more to share between now and the launch later this year. We will bring more details on the goodness of Windows Server 2019 in a blog series that will cover the areas above.

Sign up for the Insiders program to access Windows Server 2019

We know you probably cannot wait to get your hands on the next release, and the good news is that the preview build is available today to [Windows Insiders](#). Join the program to ensure you have access to the bits. For more details on this preview build, check out the [Release Notes](#).

We love hearing from you, so don't forget to provide feedback using the Windows Feedback Hub app, or the [Windows Server space](#) in the Tech community.

Frequently asked questions

Q: When will Windows Server 2019 be generally available?

A: Windows Server 2019 will be generally available in the second half of calendar year 2018.

Q: Is Windows Server 2019 a Long-Term Servicing Channel (LTSC) release?

A: Windows Server 2019 will mark the next release in our [Long-Term Servicing Channel](#). LTSC continues to be the recommended version of Windows Server for most of the infrastructure scenarios, including workloads like Microsoft SQL Server, Microsoft SharePoint, and Windows Server Software-defined solutions.

Q: What are the installation options available for Windows Server 2019?

A: As an LTSC release Windows Server 2019 provides the Server with Desktop Experience and Server Core installation options – in contrast to the Semi-Annual Channel that provides only the Server Core installation option and Nano Server as a container image. This will ensure application compatibility for existing workloads.

Q: Will there be a Semi-Annual Channel release at the same time as Windows Server 2019?

A: Yes. The Semi-Annual Channel release scheduled to go at the same time as Windows Server 2019 will bring container innovations and will follow the regular support lifecycle for Semi-Annual Channel releases – 18 months.

Q: Does Windows Server 2019 have the same licensing model as Windows Server 2016?

A: Yes. Check more information on how to license Windows Server 2016 today in the [Windows Server Pricing page](#). It is highly likely we will increase pricing for Windows Server Client Access Licensing (CAL). We will provide more details when available.