

Runecast Analyzer Minimizes Operational Risks for Supported Space Missions



DLR
**Deutsches Zentrum
für Luft- und Raumfahrt**
German Aerospace Center



Overview

The German Aerospace Center (DLR) is the national aeronautics and space research center of the Federal Republic of Germany. Its extensive research and development work in aeronautics, space, energy, transport, digitalization and security is integrated into national and international cooperative ventures. In addition to its own research, as Germany's space agency, DLR has been given responsibility by the federal government for the planning and implementation of the German space program. DLR is also the umbrella organization for the nation's largest project management agency. Headquartered in Cologne, DLR has approximately 8000 employees at 20 locations in Germany and offices in Brussels, Paris, Tokyo and Washington D.C. Senior Engineer, Michael Szczuka, works within the German Space Operations Center (GSOC) and is responsible for the VMware virtual infrastructure deployed by GSOC.



Challenge

GSOC has taken a step-by-step approach to adopting VMware vSphere resulting in a large number of different versions deployed. "Our major issue was this high number of different versions in use throughout our infrastructure," explained Mr. Szczuka. "With the added factors that 1) active systems can be hard to shut down once they are in mission critical use and 2) no central shared storage system is available, it made it cumbersome with planning overhead to free up ESXi hosts for maintenance, leading to a proliferation of many different - and legacy - ESXi versions." Initially, GSOC needed a solution that would enable effective management of their homogenous vSphere environment and minimize risk due to unpatched bugs.



Solution

Mr. Szczuka discovered Runecast Analyzer while attending the 2015 VMworld in Barcelona. Between November and December a Proof of Concept took place, resulting in Runecast Analyzer being deployed across GSOC's environment - consisting of a mix of vSphere 5.5 and 6.5 across ~80 hosts in two vCenters.

Runecast Analyzer is a patent pending proactive VMware vSphere management solution that installs as an OVA format virtual appliance. It combines the current VMware Knowledge Base articles and internal Runecast expertise to analyze the virtual infrastructure and expose potential issues and best practice violations before they cause major outages.

"Deployment and configuration was easy, with almost no additional work required," stated Mr. Szczuka.



Benefits

Providing GSOC early, proactive information about potential bugs and security risks that could lead to severe or critical operational problems is a key benefit Runecast Analyzer delivers.

"Another major benefit is risk mitigation," explained Mr. Szczuka. "In the beginning, the benefit was the simple fact that we had more leverage to keep our vSphere environment more homogenous (with regards to different versions) and up to date in order to minimize risks due to unpatched bugs. Now, we use Runecast Analyzer mostly as a solution to warn us of potential problems with new versions or updates before they manifest as real issues. Runecast Analyzer increases the stability and performance of our environment. To my knowledge there is no other solution in the market that can provide the correlation of your environment to the VMware Knowledge Base (KB) that Runecast Analyzer provides."

With many space missions relying on a stable and resilient IT environment, Mr. Szczuka explained, "We have a mission next year that will encompass a greenhouse in space so Runecast Analyzer is actually going to help us to grow food in space!"



Additional Information

Mr. Szczuka has spoken at the Frankfurt VMware User Conference about his Runecast Analyzer experience, you can watch the recording here: <https://www.youtube.com/watch?v=aATgz-GN-0o>

There is also an interview with him during the event that can be viewed here: <https://www.youtube.com/watch?v=QujNzirhtjE&t=17s>

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summary overview

customer: **DLR - The German Aerospace**
industry: **Space**
location: **Cologne, Germany**
employees: **~8000**

Keeping a disparate VMware vSphere environment stable and resilient was a challenge for DLR. Runecast Analyzer provides risk mitigation for business critical IT systems supporting space missions.

"We use Runecast Analyzer mostly as a solution to warn us of potential problems with new versions or updates before they manifest as real issues. Runecast Analyzer increases the stability and performance of our environment."

Michael Szczuka
Senior Engineer,
The German Aerospace Center (DLR)

tips and tricks

- Check for new versions of Runecast Analyzer regularly
- Don't be shy to contact support if you suspect some issue with Runecast Analyzer - in my experience support issues are addressed fairly quickly
- Use "Ignore" to filter out issues that are not relevant to your environment
- "Just try it!"