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Secure cloud-based IT helps create perfect places

Navigator provides secured IT architecture

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"Security now means taking a holistic approach to all aspects of security," said Earl Perkins, Research Vice President at Gartner, during a presentation at Gartner Security & Risk Summit. "Digital security is the next evolution in cybersecurity to protect this pervasive digital presence."

In today's increasingly connected world, protecting IT network integrity is no longer optional. Cyber-crime is widespread and expensive. It costs the global economy over 400 billion U.S. dollars, and 51 million EUR per year, according to estimates by the Center for Strategic and International Studies, a Washington, D.C. think tank. In 2016, according to data from the German Federal Criminal Police Office, the police recorded some 83,000 cases of cyber-crime in Germany. This resulted in a loss of over 51 million Euros.

The problem continues. An ever-growing number of companies rely on online IT applications to process and store their critical data. That makes securing IT architecture a crucial step in their success. Cybersecurity policies must preserve three things about data: Confidentiality, integrity, and availability. Only those with the right to view data should have access to it; those who access it need to rely on its accuracy; and it must be easily accessed when and where needed.

Secured cloud-based services

Our cloud-based services, including Navigator, follow a comprehensive and holistic cybersecurity process, where cybersecurity activities are implemented across our solution portfolio.

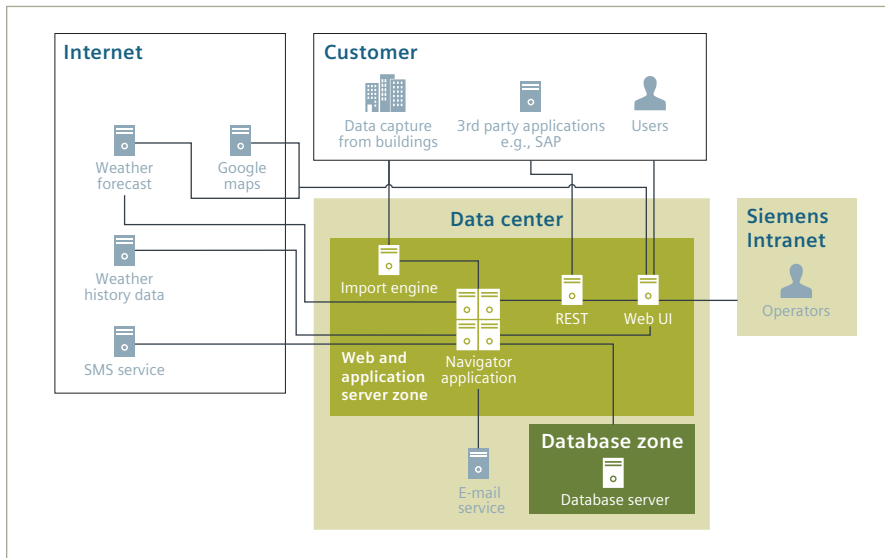
Such activities include security testing, code reviews and static code analysis as well as unit and integration testing. Risks are systematically assessed and addressed via threat and risk analysis activities, in which remediation measures are defined and prioritized.

Regarding emergency management, Navigator, like all of our products and solutions, is subject to an incident and vulnerability handling process in the event that a vulnerability or threat is detected.

We have a support mechanism for customer-reported vulnerabilities or other detected issues. Both are submitted to our technical support team and handled by the Siemens ProductCERT team, our global computer emergency response team, which operates globally around the clock.

Navigator: The cloud-based energy and sustainability platform

Multiple network zones for secure system architecture



The graph shows the Navigator system architecture with all interfaces. For security reasons, the overall system consists of multiple network zones. Each zone has specific security parameters. Communication with the Navigator servers is protected by https TLS encryption.

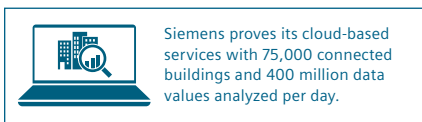
Navigator is our single, integrated energy and sustainability platform that provides powerful analytical and reporting capabilities. It gives visibility into the long-term performance of our customers' facilities and infrastructure. When the right building data is properly applied by our experts, we help create perfect places for our customers.

Navigator enhancements

Siemens is committed to ensuring that our Navigator technology continues to deliver very high security, reliability, and performance standards. Siemens experts continuously implement "under-the-hood" enhancements for our Navigator cloud setup. This has enabled us to optimize availability of processing power, data storage, and memory to speed up tasks for end-users. We also increased system redundancy. All infrastructure and application deployment is fully scripted and automated. In case of a server instance crash or failure, we automatically spin up a new one and deploy the application by script.

Creating perfect places

Siemens is the expert in turning big data into smart data. Cloud-based technology and services help us collect the type of building data that is used to improve building performance and sustainability. Remote connections allow for digital services such as fault detection and diagnostics and energy efficiency programs. Our experts, including those at the Digital Service Centers, use our digitally enhanced technology like Navigator to turn data into results.



Siemens proves its cloud-based services with 75,000 connected buildings and 400 million data values analyzed per day.

Highlights

- Security by design: Siemens makes cybersecurity an integral part of Navigator design and implementation
- Risk assessment: Cybersecurity risks are systematically assessed and addressed via threat and risk analysis activities
- Security in software development: Security testing in the software development lifecycle is supported by code reviews and static code analysis as well as unit and integration testing
- Penetration tests: Navigator interfaces are regularly and comprehensively tested for vulnerabilities
- Secure architecture and systems management through layered security and reduction of the attack surface
- Access management for application users: Role-based and secured access to all data
- Secure access of system administrators: Safeguard high-privileged access via two-factor authentication and no connectivity on network level
- Security monitoring and testing are performed along the service lifecycle
- Physical and environmental security of the data: Siemens uses state-of-the-art data centers managed by a leading cloud service provider (including data backups)

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When building technology creates perfect places – that's Ingenuity for life. With our knowledge and technology, our products, our solutions and our services, we turn places into perfect places. We create perfect places for their users' needs – for every stage of life.

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