

Take charge of your infrastructure and services with ServiceNow® ITOM Visibility

The IT challenge

If you can't see your IT environment, you can't manage it. Unless you have visibility of your infrastructure—and know how this delivers your mission-critical services—there's no easy way to diagnose and fix service outages, resolve performance issues, assess the risk of changes, optimize infrastructure costs, minimize software compliance issues, or respond quickly to security threats.

Many IT organizations still rely on slow, error-prone manual processes to document their infrastructure and services. Even if they do use traditional infrastructure discovery tools, they still struggle with long discovery delays and have no automated way of discovering the actual services that their business consumes. Instead, subject matter experts spend weeks mapping services by hand using stale discovery data—by which time, the map is already out of date.

This approach is no match for today's rapidly expanding, dynamic IT environments. While it may have worked in the past for small, static IT networks, digitalization and the cloud have rendered it obsolete. When changes are measured in minutes, it just can't keep up. The result? Broken services, escalating costs, and an inability to respond quickly and effectively to business needs.

The ServiceNow solution

ServiceNow® ITOM Visibility gives you an accurate, up-to-date view of your IT infrastructure and services, spanning both multi-cloud and on-premises environments. It automates the end-to-end infrastructure discovery and service mapping process—including tracking ongoing changes—creating a complete and reliable record in your CMDB. This infrastructure and service information is seamlessly leveraged by other ServiceNow applications such as ITOM Health, ITOM Optimization, and Software Asset Management, and you can easily enrich it with additional configuration information by integrating with third-party applications and data sources.

ITOM Visibility includes two complementary features that create this comprehensive visibility:

- **Discovery** discovers physical and logical CIs, such as servers, switches, routers, virtual machines, storage elements, databases, and applications. It also discovers relationships between these CIs. This includes mapping upstream and downstream application dependencies by identifying communication flows down to the TCP port and process level.
- **Service Mapping** builds on this discovered infrastructure data, creating end-to-end maps of your services. It identifies all of the CIs that support each service, along with their service-specific relationships. This includes mapping complex service topologies that incorporate shared and redundant elements such as an enterprise bus or server cluster.

To understand the relationship between these two features, think about a city bus map. The underlying road map shows all of the city's roads and how they intersect. In the same way, Discovery shows you all of your CIs and how they are related. Now, think about a bus route. This shows you the specific roads that make up the route and which intersections the bus passes through. This is the equivalent of a service map, which shows you the CIs (roads) that support the service, along with their service-level relationships.

And, just like roads and bus routes, these two features work seamlessly with each other. For instance, you can instantly see which services are impacted by a CI issue, in the same way that a city bus map lets you see which bus routes are affected by a road closure. Similarly, you can drill down from a service map into a supporting CI to see detailed configuration information.

Accelerate your multi-cloud strategy

Get near real-time visibility of your multi-cloud and on-premises infrastructure, including out-of-the-box support for Amazon AWS, Microsoft Azure, Google GCP, IBM Cloud, VMware, Citrix, Kubernetes, and more.

Get end-to-end service visibility

Break down infrastructure silos with up-to-date, accurate visibility of your IT infrastructure and services. Instantly see the service impact of infrastructure issues and changes, simplify root-cause analysis, and reduce MTTR.

Drive operational excellence

ITOM Visibility works seamlessly with ITOM Health, ITOM Optimization, ServiceNow® ITSM and other ServiceNow applications to help you improve service quality, strengthen change processes, reduce risk, optimize infrastructure spend, and minimize software compliance issues.

Agentless, scalable, and secure

ServiceNow's scalable and distributed discovery architecture uses standard protocols and encryption to securely discover your infrastructure and services.

Fast time to value

Get up and running quickly with hundreds of supported devices and services, bulk service mapping, and guided setup tools.

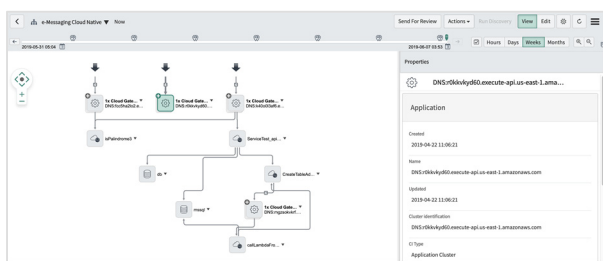
Easy extensibility

Easily add support for new types of infrastructure and services with built-in no-code/low-code tools.

Built for multi-cloud environments

Discovery supports Amazon AWS, Microsoft Azure, Google GCP, and IBM Cloud, including both IaaS and PaaS infrastructure, as well as container and serverless technologies such as Kubernetes, Docker, and AWS Lambda. It also discovers VMware and Citrix infrastructure in virtualized on-premises environments. And, you can easily extend these out-of-the-box capabilities to support additional cloud technologies and vendors.

Discovery is also designed to keep pace with rapidly changing cloud infrastructure. While it supports scheduled and on-demand discovery, it also triggers targeted discovery automatically when it receives change events from cloud interfaces such as the AWS Config API. This gives you near real-time visibility of your cloud environments, unlike traditional scheduled discovery tools.



AWS infrastructure, including Lambda, S3, and RDS

Agentless, scalable, and secure

Discovery and Service Mapping don't require embedded agents. Instead, a lightweight Java Management, Instrumentation, and Discovery (MID) Server runs as a Windows service or UNIX daemon on standard hardware or a virtual machine inside your firewall. Each MID Server handles thousands of devices, and you can deploy multiple servers in different network segments, providing virtually unlimited scalability. Discovery also provides a quick-start mechanism to populate IP subnets and ranges and uses this data to stagger jobs by location, making the discovery process even more flexible and robust.

MID Servers communicate securely over HTTPS with your main ServiceNow instance, downloading discovery instructions (patterns) for different types of infrastructure and services. MID Servers also communicate over encrypted protocols with devices, clouds, and container environments, using SSH, WMI, WinRM, SNMP, SMI-S, CIM, or RESTful APIs as appropriate. Credentials are stored on MID Servers using 3DES encryption and cannot be displayed once they have been entered, or alternatively they can be held in standard Privileged Access Management (PAM) tools such as CyberArk® and BeyondTrust® using productized integrations available on the ServiceNow Store. All discovery data is returned to the main ServiceNow instance and is not retained in the MID Server.

Data integrity

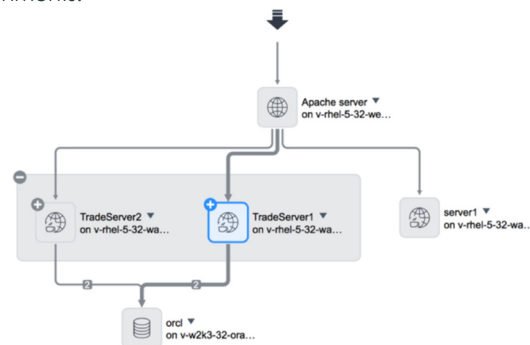
Discovery provides robust mechanisms to help you maintain CMDB data integrity. For example, you can configure actions to be

performed when a newly discovered device matches an existing CI in the CMDB. Discovery also works seamlessly with Change Management, allowing change requestors to validate modifications to CIs.

Bulk and traffic-based service mapping

Using Service Mapping's intuitive user interface, you can map multiple services in parallel. This bulk mapping approach accelerates the initial mapping process—and time to value—by letting you identify and address CI issues holistically, rather than on a map-by-map basis. Once a service has been mapped, Service Mapping keeps the map up to date and accurate by automatically detecting relevant changes in your IT environment. It also maintains a complete history of these changes, allowing you to compare service topologies at any two points in time. This makes it easy to correlate changes with service issues, validate planned changes, and identify unplanned changes.

In addition to these deep vertical service mapping capabilities, Service Mapping also provides traffic-based mapping, using machine learning to build and refine lightweight service maps from discovered CI-to-CI flows. While this traffic-based approach does not provide the same comprehensive service information as vertical mapping, it does provide complementary data and can also be used standalone in lower-complexity IT environments.



Service maps drive service-aware operations

Easy extensibility with no-code/low-code tools

Discovery and Service Mapping come with hundreds of patterns—prebuilt instructions to discover specific types of infrastructure and services. You can also easily extend this rich library to discover additional infrastructure and service types. Both Discovery and Service Mapping come with a built-in pattern framework that lets you configure new patterns for any IP-enabled device with little or no coding.

As well as building your own patterns, you can also download new patterns as they become available in the ServiceNow Store. These patterns are released independently of ServiceNow product releases, so you can use them without having to upgrade your ServiceNow instance.

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