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*Making digital happen*

# Thinking outside the box to accelerate security in a hybrid environment

**Robert Wysocki**

*Chief Technology Officer*

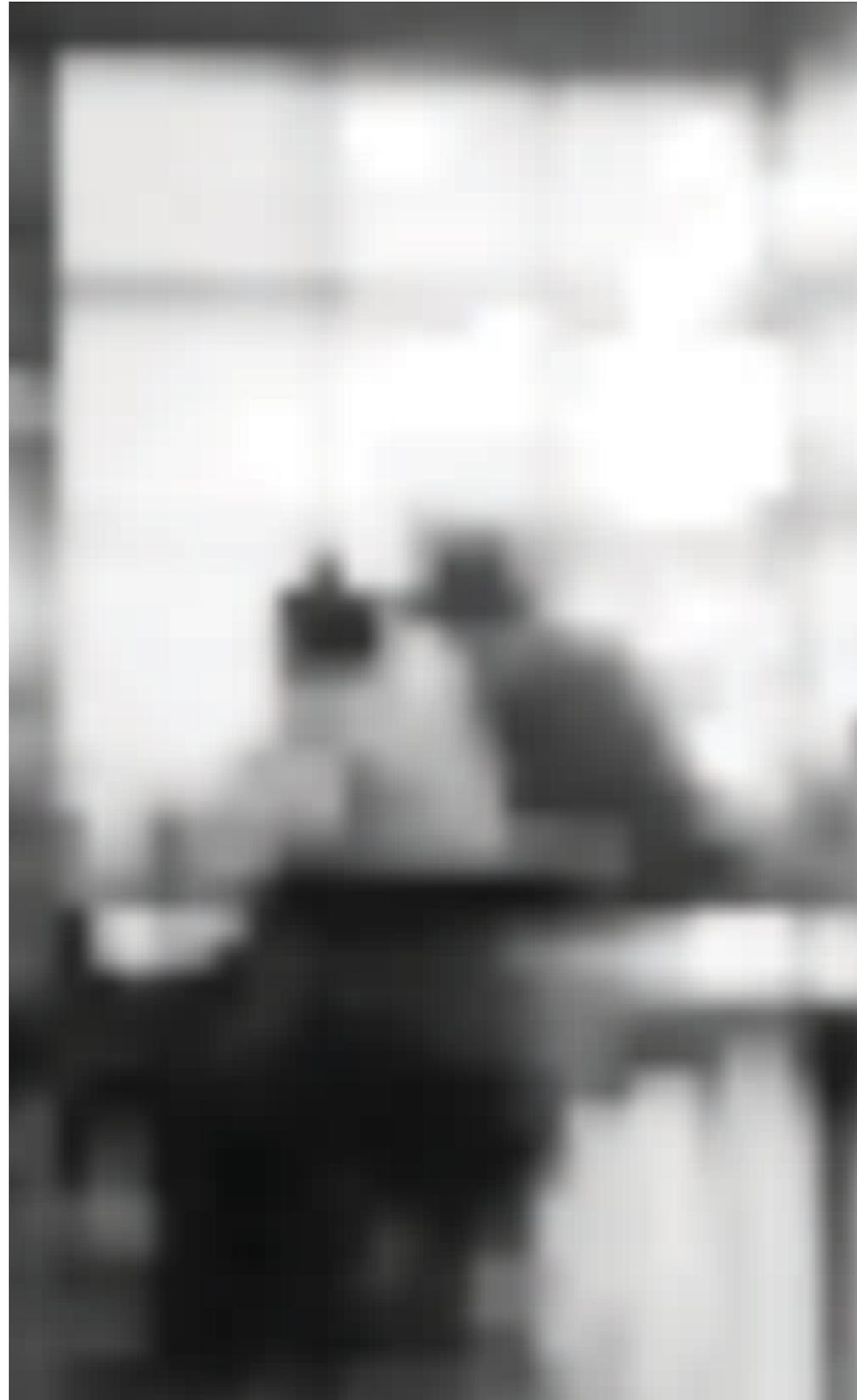


## Microland: Thinking outside the box to help clients accelerate security in a hybrid environment

“In technology, there is too much repetitive work,” said Mr. Robert Wysocki, Chief Technology Officer of Microland Ltd. “For example, setting up labs to validate vendor capabilities — 80% of these tests are likely common across enterprises. By making this work widely accessible and shareable, we enable everyone to move at a quicker pace and allow enterprises to focus on value-add functions that are truly core to their business.”



Robert Wysocki



An impediment to IT transformation is the lack of accredited reference solutions to assess the design and implementation of new technologies. This leads to a constant and far-reaching repetition of technology validations by independent organizations – a state of affairs that is extremely inefficient to buyers and sellers alike.

To solve this agility conundrum, Microland partnered with ONUG (a leading IT industry community [www.onug.net](http://www.onug.net)) on a collaboration to generate reference architectures to the most pressing complex IT problems and create a verification process for other progressive IT vendors to certify their own solutions against the reference architectures.

The joint partnership led to the very first such reference architecture and solutions verification process for IT vendors. Given that Cybersecurity is widely viewed as one of the largest disablers towards adopting modern technology, it was decided to focus first in this space.

**Approach: ONUG surveys the enterprise IT community to determine the top cybersecurity use case they wanted solved once and for all.**

High on the list for enterprise IT architects was the desire to take advantage of multi-cloud capabilities in conjunction with the portability of new technology solutions like containers. But they worried that they would not be able to protect their workloads with a consistent policy as they moved from cloud to cloud, or from VM's to containers. How could they be assured that nothing was compromised?

Industry-certified reference architectures enable IT teams to deploy these elements as critical foundational infrastructure “Lego blocks” that can be trusted.

The prioritized use case requirements derived from this problem statement were to design a reference architecture which accomplished:

- 1) Security policies bound to workloads
- 2) Security policies enabled to be written once, but be deployed and enforced in multiple places
- 3) Ratified measurement of workload ability to ensure confidentiality, integrity and availability of the services delivered

Microland very quickly developed the reference architecture which was well-received by the ONUG board and its constituents at their annual Spring conference in Dallas May 2019.

Next, Microland delivered a lab environment and verification process so that independent hybrid cloud security vendors could certify their products and services against the reference architecture, receiving an ONUG-accredited seal of approval.

Today, there are over 19 use cases where Microland has succeeded in providing a solution that holistically addresses workloads regardless of their footprint (across containers, virtual machines, applications storage, etc) replacing the traditional solutions that resolved disparate elements but not the composite whole.

These verified solutions are having a hugely positive impact on enterprises by enabling IT teams to have confidence using validated elements as working components to solve their own real-time barriers to achieving business objectives such as faster time to market.

# Description of the architecture framework

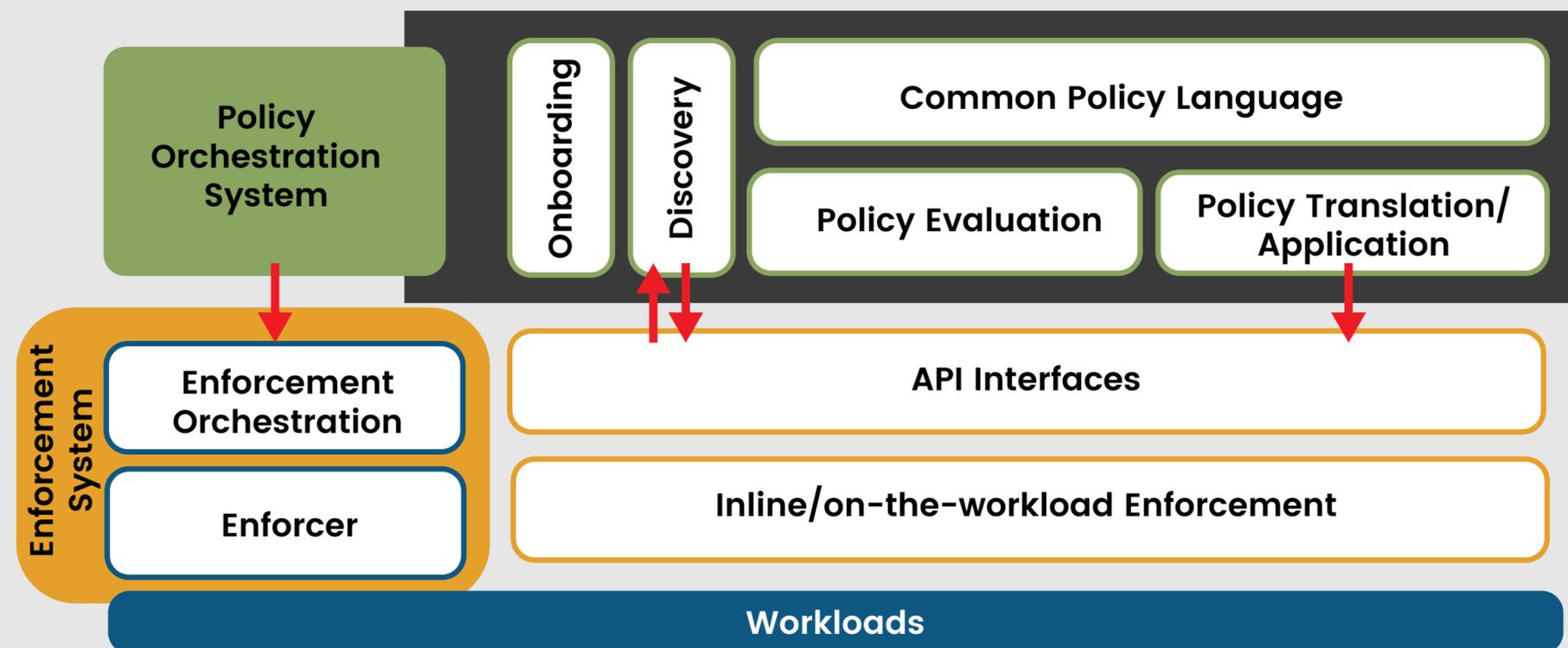
## Reference architecture

The reference architecture has two major components noted in the diagram beside.

They are:

- 1) A Policy Orchestration System
- 2) An Enforcement System

## ONUG cyber solution - Level 1 reference architecture



## Policy Orchestration System

The Policy Orchestrator is a multi-environment system that communicates with different types of enforcement systems and is a single pane of glass with the following features and functionalities.

### Common Policy language:

For example, YAML based policy-based definition can be used to write security policies that can be further translated by the policy translation engine into the respective format understood by the environment. In the same way, the existing workload security policies should also be translated into common policy language format so that it can be stored and retrieved.

### Onboarding:

The Onboarding module lets the customer upload his data center environment or public cloud environment / workloads into this system. It maintains details about workload and associated policies with the workloads. These details are further used by the Discovery module to find the workloads in the environment and map it to the system.

### Discovery:

Using the details from the Onboarding module, the Discovery module scans and discovers the workloads available in each of the customer onboarded environment. These workloads are made available for the Policy application engine to apply the policies. Also, any change in workload or policies will be identified by the Discovery module.

### Policy evaluation:

The Policy Evaluation module is used to do common sanity checks on the policy defined on the common policy language. This also makes sure that defined policies can be translated to the target environment

### Policy Translation / Application:

Policy Translation uses the validated policies from the Policy Evaluation engine and then translates the policies written in the common policy language to the format the target environment understands. Also, these translated policies are applied by the same module.

## Enforcement System

The enforcement of the defined policies are pushed to workloads via enforcement systems. The Enforcement system can be a simple enforcer or it can be a complicated enforcement orchestrator. The enforcement channels can be via cloud native enforcers / APIs , agent based and through overlays. The system manages the communications between policy orchestrator and the workloads

“In the digital era, IT is a solution integration function where coders stitch software building blocks together to deliver good digital outcomes. The problem is a lack of reference solutions to guide this work, thus IT organizations are on their own in an endless cycle of trial and error that wastes time and resources,” said Nick Lippis, ONUG Co-Founder and Co-Chair. “The ONUG and Microland Ltd. partnership aims to provide well-understood and verifiable reference solutions that IT professionals can use to hasten their journey to become digital enterprises.”



**Robert Wysocki**  
*Chief Technology Officer*

Robert (Bob) Wysocki's core responsibilities at Microland include driving innovation, incubating emerging technologies, and enabling customers to deploy key digital technologies for rapid business and operational transformation.

Bob is a seasoned IT evangelist with over 30 years of industry experience, gained at Fortune 20 as well as start-up organizations. During his 16 years at General Electric (GE), as an executive in Corporate Shared Services IT, he drove strong business results in numerous disciplines of procurement, product management, engineering, operations, and financial management. Bob led the initial services definition of infrastructure for GE's Predix Cloud platform and most recently played a key role in executing GE's transformation of Edge Networking to enable their cloud-first strategy. Prior to GE, he also led technology and engineering leadership roles at Pilot Network Services and AT&T, architecting solutions with the commercial value of \$1Billion. A recognized industry leader, Bob most recently co-chaired the ONUG Hybrid Cloud Working Group for which he received an award at ONUG Fall 2017 for leading the engagement of Cloud Services and Container Orchestration Providers to embrace enterprise IT requirements of their services.

Microland's delivery of digital is all about making technology do more and intrude less. As we help enterprises move to nextGen technologies, we make sure this embrace of brilliance is predictable, reliable and stable.

Incorporated in 1989 and headquartered in Bengaluru, India, Microland comprises more than 4,500 digital specialists across offices and delivery centers in Asia, Australia, Europe, Middle East and North America.

For more information visit [www.microland.com](http://www.microland.com) or email us at [info@microland.com](mailto:info@microland.com)

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