vmware®

Pulse™

Take Control of the Edge

VMware's Role in the Internet of Things

VMware and the Internet of Things

The Journey So Far

DISCOVER MORE

VMware IoT Partnerships

DISCOVER MORE

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OCT 2014

VMware joins the Industrial Internet Consortium

VMware joins the Industrial Internet Consortium (IIC) to further advance and support enterprise IoT initiatives.

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JAN 2015

IoT and SDDC seen as greater than the sum of their parts

The potential results of combining endpoint connectivity and cloud/software-defined data centers begin to emerge. Connected IoT devices feed tremendous amounts of data back into the SDDC or cloud, unveiling previously unavailable insights based on the analysis of that data.

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MAR 2015

VMware supports the DIGIT Act

In discussions with the US Senate's bipartisan IoT Working Group, VMware extended support for the DIGIT (Developing Innovation and Growing the Internet of Things) Act.

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LIOTA™

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JUN 2015

VMware launches Liota

VMware launches Liota (Little IoT Agent), the industry's first vendor-neutral, Open Source framework for IoT gateway orchestration application development.

OCT 2014

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AUG 2016

VMware announces key strategic IoT alliances

VMware announces collaboration with Dell, PTC, Deloitte Digital, Bayshore Networks, Intwine Connect, and V5 Systems.

With these strategic alliances, VMware addresses management and security concerns while:

- Allowing IT to provide businesses with the necessary infrastructure to keep from being disrupted

- Enabling OT to streamline its management and operations of IoT to scale across newly connected objects

DELL   ptc   Deloitte. Digital   BAYSHORE   intwine connect   V5 SYSTEMS

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BASK IYER

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SEP 2015

VMware CIO urges Congress to support IoT

Bask Iyer, VMware CIO, meets with Congress and other officials to discuss the IoT, and the importance of security and flexibility within the IoT ecosystem.

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DEC 2016

IDG releases 2016 study of the Internet of Things*

Primary findings from respondent companies reveal:

72% companies expect IoT to become highly relevant to them in the next three years

44% companies cite security concerns as the greatest hurdle for IoT projects

40% companies that are preparing for IoT projects

* IDG Research Services, Study: Internet of Things 2016, Dec. 2016

VizExplorer™

FEB 2017

VMware and VizExplorer announce partnership

VMware and VizExplorer announce partnership to deliver integrated IoT solutions that provide industry-specific IoT management, security and analytics–starting with healthcare.

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MAR 2017

Fujitsu and VMware expand their strategic collaboration

Fujitsu and VMWare announce an expanded strategic collaboration to bring IoT solutions to the automobile industry that focus on connected cars and autonomous driving.
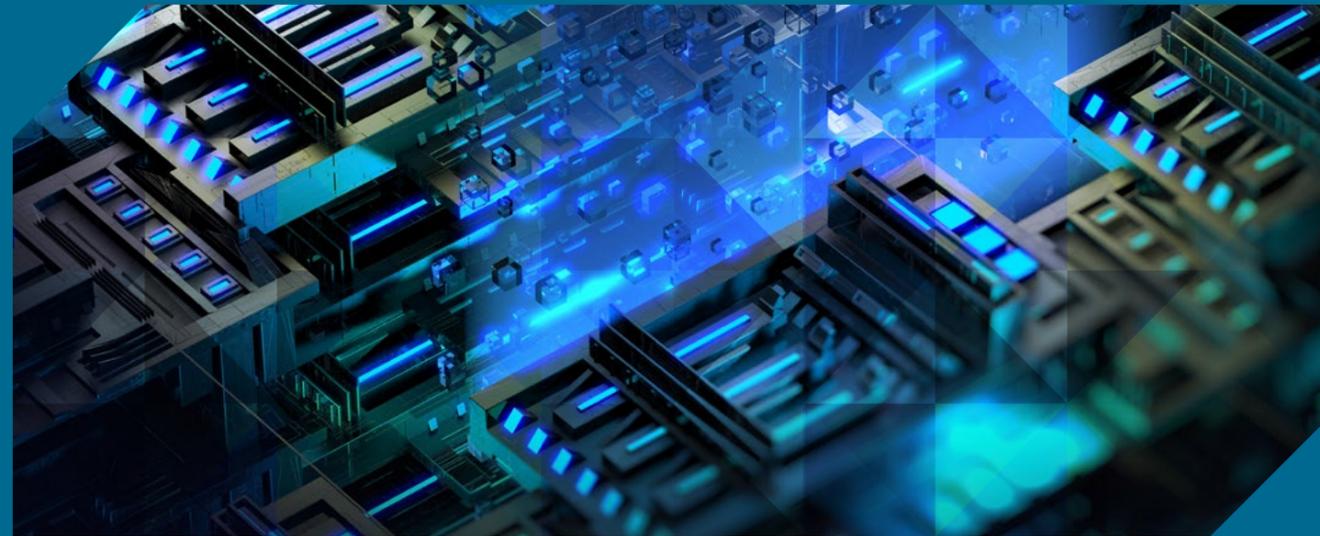

HARMAN and VMware partner

HARMAN and VMware partner to accelerate IoT adoption for enterprises through convergence of IT and OT. HARMAN's gateways, sensors and edge analytics combined with VMware's IT operational management and edge solutions enable scalable and secure enterprise-class IoT.

FUJITSU

HARMAN
A SAMSUNG COMPANY

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APR 2017

VMware co-founds Edgex Foundry

VMware becomes a founding member of Edgex Foundry, an open source project to build a common open framework for IoT edge computing.

Eurotech announces new partnership with VMware

Eurotech helps bring VMware's technology to multi-service IoT gateways and edge controllers for more efficient resource allocation in industrial and mobile networking applications.

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EDGE X FOUNDRY™

EUROTECH

MAY 2017

VMware defines a new architecture for IoT

PREDICTIVE MAINTENANCE   SUPPLY CHAIN AUTOMATION   NEW CUSTOMER EXPERIENCE

SET UP   ONBOARD   MONITOR   MANAGE   SECURE

VMware identifies an IoT infrastructure management blueprint

A blueprint emerges for the functionality and capabilities necessary to manage the IoT control plane in enterprise-scale production environments.

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VMware outlines Enterprise IoT Challenges
As enterprises embrace IoT, they run into clear challenges:

1 Management

Managing and monitoring diverse types of connected devices in a single console

2 Security

IoT has expanded the surface area of attacks, creating a need for multilayer security

3 Scale

An unprecedented volume of things needs to be scaled up and down based on changing business needs

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MAY 2017

VMware unveils IoT infrastructure management solution

VMware launches VMware Pulse IoT Center, a secure, enterprise-grade, end-to-end IoT infrastructure management solution that enables IT and OT teams to have complete control of their IoT infrastructure and things. It helps organizations onboard, manage, monitor and secure all their connected things and gateways from the edge to the cloud.

Samsung Electronics and VMware team up

The new collaboration helps simplify IoT for both IT and OT teams by expanding end-to-end IoT solutions for industrial and enterprise customers.

SAMSUNG
ARTIK™

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○ MAR 2017

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○ MAY 2017

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AUG 2017

VMware announces collaboration with ADLINK Technology

A new collaboration with ADLINK Technology provides mutual customers with a pre-integrated IoT solution that takes the guesswork out of selecting the hardware and software components of a typical IoT architecture.

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○ MAY 2017

○ AUG 2017

● SEP 2017

○ OCT 2017

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○ JAN 2018

SWITCH TO PARTNER ECOSYSTEM

SEP 2017

VMware joins forces with ZingBox

VMware announces a collaboration with ZingBox to deliver enhanced security to enterprise IoT implementations at every level of the architecture: software, hardware, network and user.

ZingBox

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VMware teams up with SAP

VMware announces a collaboration with SAP to streamline enterprise IoT initiatives. The goal is to create an integrated IoT solution that supports the implementation and management of IoT use cases across devices, infrastructure, edge, cloud and application domains.

OCT 2017

VMware announces new IoT solution at IQT Day

VMware announces "Project Fire", a hyper-converged platform that is a future product of the VMware Pulse family of IoT solutions.

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aws

NOV 2017

VMware introduces the AWS Greengrass on vSphere preview

AWS Greengrass on VMware vSphere allows select AWS services to run on vSphere in the data center or at the edge. Enterprises can run local cloud compute, messaging, data caching, sync capabilities, and AWS Lambda functions at the edge. In addition, connected devices can run AWS Lambda functions, keep device data in sync, and communicate with other devices securely, even when not connected to the Internet.

Greengrass enables IoT devices to respond quickly to local events, operate with intermittent connections, and minimize the cost of transmitting IoT data to the cloud. It also seamlessly extends AWS to devices so they can act locally on the data they generate, while still using the cloud for management, analytics, and durable storage.

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JAN 2018

VMware and Bossa Nova Robotics collaborate on IoT

Bossa Nova's inventory-scanning retail robots autonomously navigate a store and take stock of what's on the shelves, checking for out-of-stock items, incorrect prices, and wrong or missing labels. Having robots conduct these repetitive tasks frees up store associates to interact directly with customers and improve the shopping experience. VMware Pulse IoT Center will help with onboarding, managing, monitoring and securing these robots.

bossanova

VMware IoT Pulse Center becomes generally available

VMware Pulse IoT Center, a secure, enterprise-grade IoT device management and monitoring solution, becomes generally available after extensive beta testing. VMware begins leveraging key partnerships to help customers better manage and monitor their "things" and infrastructure in a secure fashion and at scale. Companies across a broad range of industries, including automotive, entertainment, healthcare and industrial will benefit from the solution.

Why Partnership model?

Implementing an IoT solution today is a huge challenge for enterprises, as they often need to cobble together offerings from various vendors with few standards and little guidance.

According to Gartner, "The rate of failure in IoT projects will double by 2021, as existing technologies fail the challenges of scale." *

VMware and its rich partner ecosystem can:

Take the guesswork out of IoT implementation decisions

Help bridge the gap between the IT and OT worlds

Help deploy an end to-end IoT solution from the device to the datacenter

* Gartner, George Brocklehurst & Bill Ray, Market Trends: IoT Endpoints Will Need New Technologies to Achieve Scale, 23 October 2017

SWITCH TO THE INTERNET OF THINGS

Thing/OEM Manufacturers

Hardware considerations are critical to the success of an IoT deployment. It is important to consider which sensors fit your use case and if you will need on-prem aspects to the deployment – either at the location of the IoT use cases or in a private data center. In addition, in some cases you will need solar-powered edge systems or hardware specifically made for more rugged, outdoor, or refrigerated environments since most of your things will reside in remote, unmanned areas.

DELL · ZEBRA · ABB · HARMAN · V5 SYSTEMS · bossanova · intwine connect · kieback&peter · Hewlett Packard Enterprise

How Customers Benefit

1. Deploy a connected thing that is IT-approved and pre-validated

2. Have a solution that can manage and configure many heterogeneous things in a single console

3. Get curated, industry-specific solutions that are "manageable" out of the box

SWITCH TO THE INTERNET OF THINGS

WHY PARTNERSHIP MODEL?
THING/OEM MANUFACTURERS
GATEWAY/ EDGE SYSTEM MANUFACTURER
BUSINESS APPLICATIONS & ANALYTICS
IOT PLATFORM VENDORS
SYSTEMS INTEGRATORS

SWITCH TO THE INTERNET OF THINGS

Gateway/Edge System Manufacturers

With the advent of the 3-tier architecture (thing–gateway/edge system–cloud), gateway/edge systems have become a major component of any IoT-ready architecture. These gateways do a lot of the heavy lifting for the things connected to them, such as performing storage and edge analytics, integrating protocols for networking, and facilitating data orchestration securely between edge devices and the cloud.

VMware has selected curated gateway manufacturers that cater to specific use cases as well as broad ones to provide a great selection for customers.

DELL   EUROTECH   ADLINK TECHNOLOGY INC.   SAMSUNG   HITACHI   CloudSense   hp   ITG   AXIS COMMUNICATIONS

How Customers Benefit

1 Get the edge system/gateway of their choice along with the ability to do software and firmware lifecycle management at scale

2 Enjoy a multi-vendor, heterogeneous gateway architecture that is managed, monitored and secured from a single pane of glass

3 Provides more efficient and secure gateways (with virtualization)

4 Provides a gateway/edge system that is "manageable" and IT approved

Business Applications & Analytics

Applications, and in particular tools for analyzing and extracting value from the data generated by connected things, will be essential to maximizing the benefits of any IoT implementation. VMware has partnered with leading global players whose expertise spans the gamut of industry sectors.

VizExplorer™   SAP   IBM   CenturyLink   ZingBox

How Customers Benefit

1 Customers get a pre-integrated IoT application solution along with the underlying IoT infrastructure management and monitoring capabilities

2 Customers get the flexibility of choosing on-prem capabilities and cloud capabilities for their architecture

IoT Platform Vendors

Sitting at the heart of IoT infrastructure, IoT platforms play a crucial role ensuring seamless integration of different IoT hardware devices and IoT applications that support analysis, data visualization, and more. VMware has partnered with global companies whose IoT platforms are market-leading across key industry verticals. Together, they will offer IoT starter kits that are industry and use case-specific and on-prem, delivered directly to the factory floor, a hospital, an oil rig, or power plant–and significantly reduce the time it takes for customers to deploy IoT. These packaged solutions will include VMware IoT Solutions to manage, monitor and secure a variety of IoT edge systems and connected devices as an integrated part of the IoT platform. It will also include VMware's hyper-converged infrastructure software to save time, effort and cost to deploy IoT.

thingworx   FUJITSU   SAP   IBM   BOSCH

How Customers Benefit

1   Get operational as well as business analytics
in the same solution

2   Have the option of a completely integrated (software+hardware)
mini datacenter which they can deploy at the edge

SWITCH TO THE INTERNET OF THINGS

Systems Integrators

Global leaders in systems integration will have a critical role in the design and implementation of many IoT projects. These projects will require expertise across a wide range of information and communications technologies as well as the ability to execute at scale and, in many cases, across multiple locations. VMware has partnered with a select group of market leaders who will embed VMware's IoT solutions into their recommended architectures.

Deloitte. Digital   Cognizant   Tech Mahindra   FUJITSU   CSC   wipro   Atos

How Customers Benefit

1 Pre-integrated, pre-validated IoT solution that meets the requirements of both OT and IT organizations

2 Have on-premise capabilities

3 Expertise of industry-leading IT providers (VMware) and industry-specific knowledge (System Integrator partners) in setting up your IoT architecture

4 Solution purpose-built for their use case which can be managed from the edge all the way to the cloud