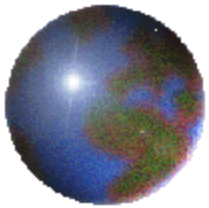
The Internet of Relevant Things



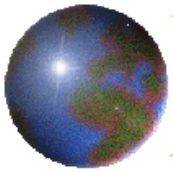
AVADA SOFTWARE
Infrared 360

Work Smarter, Not Harder

Avada Develops and Markets

One comprehensive web portal providing **selective visibility** to enterprise middleware environments and perimeter technologies.

Infrared360 provides **trusted spaces** for collaboration *between* business lines or *within* business lines in order to facilitate focus and security to *relevant* information



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What are some examples of Enterprise Middleware Environments?

Enterprise Messaging :

IBM/WMQ, Tibco/EMS, Jboss/AMQP

Transformation :

IBM-Broker-Integrator, Mule

App-Servers :

WebSphere, JBoss, Apache/Tomcat, TC-Server, Weblogic

Integrated Perimeter Technology:

Data Power, Web Services, Rest, URLs, Sockets, APIs

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Why so much talk about the internet of all things?

In 2009 Kevin Ashton wrote:

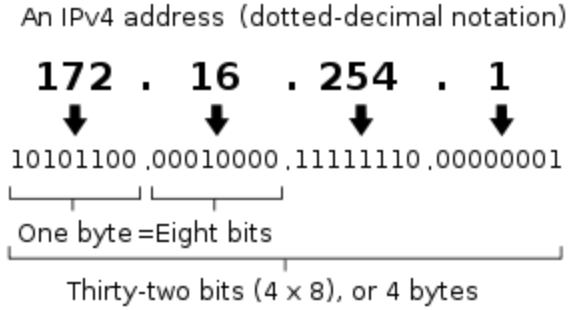
"If we had computers that knew everything there was to know about *things* --- using data they gathered without any help from us—we would be able to track and count everything, and greatly reduce waste, loss and cost. We would know when things needed replacing, repairing or recalling, and whether they were fresh or past their best. The Internet of Things has the potential to change the world, just as the Internet did."

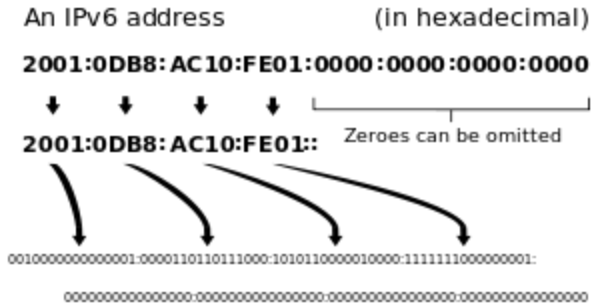
Why so much talk about the internet of all things?

On June 6, 2012 :

A brand-new version of the Internet was turned on.
Chances are you didn't notice but that was the day we switched over to
Internet Protocol Version 6, or IPv6

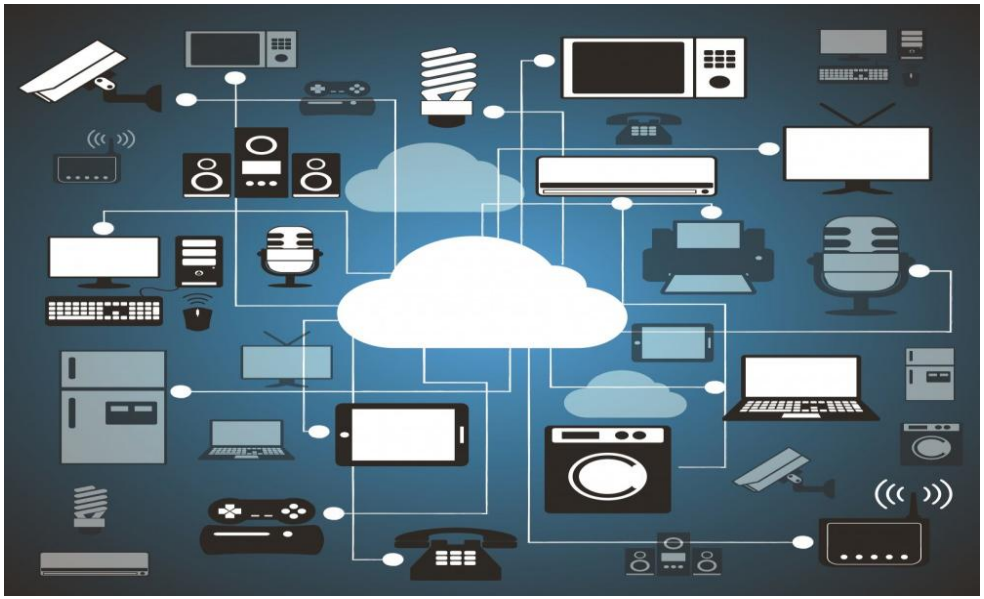
Why? Previously there were only 4.3 billion unique addresses. IPv6 provides trillions more addresses!





Why? Every year, as more smart devices are invented and connected to the Internet they can have an address. Soon there will be more devices on the Internet than there are people on Earth. Estimates for 2018 show Earth will be home to 7.6 billion people, as contrasted with 25 billion devices - 50 billion by 2020!!

Why so much talk about the internet of all things?



Billions of ordinary things — Everything from fitness bands to internet connected fridges, smart thermostats to street lights — are being outfitted with microchips and linked by online networks to feed data back to the net in a technological transformation that some experts predict will be as profound as the Industrial Revolution

Avada Software

Why so much talk about the internet of all things?

Good or Bad?

Monitoring sensors can predict a failing part on a household appliance and order a replacement for you in advance! You will have an iBeacon that will turn your TV to your favorite program as you walk into the room.

All that information can also be used to predict your daily habits, likes, whereabouts, and communications - something people are writing laws about in order to stave off the NSA ;)

Why so much talk about the internet of all things?

Good or Bad?

People like having data that makes their lives convenient and productive.

Even for personal health and sports – they want something that tells them ‘1200 calories today’.

What they don’t want is someone *else* telling them “you’re limited to 1200 calories today”

– especially if they challenge the sensor via bug or out of context

The Issue then becomes WHO should see the data – and when!

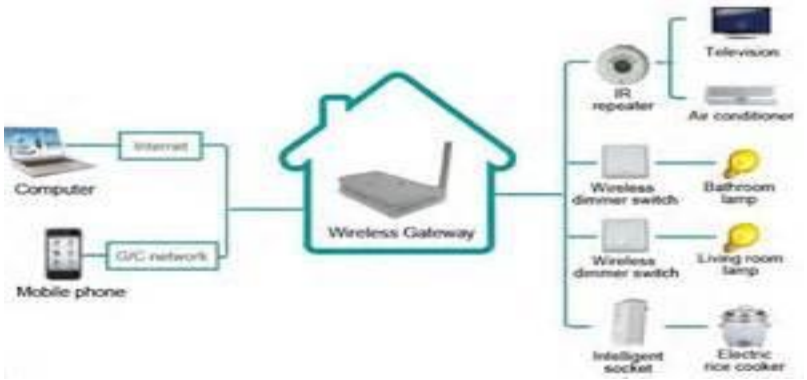
Avada Software

Why so much talk about the internet of all things?

What the heck does this have to do with middleware?!

Well, let's take the concept of IoT.

Devices, sensors, instrumentation, monitoring, feedback, reports, actions.



That sounds a heck of a lot like what Avada Software does for the middleware environments!

Monitor devices to predict and notify when a process, queue, connection, integration, info feeder or info receiver are not working!

Avada Software

Why so much talk about the internet of all things?

What the heck does this have to do with middleware?!

The issue is the same as the health monitor - who do you want to see that the threshold has been exceeded – except Avada does that for your middleware transaction environment!

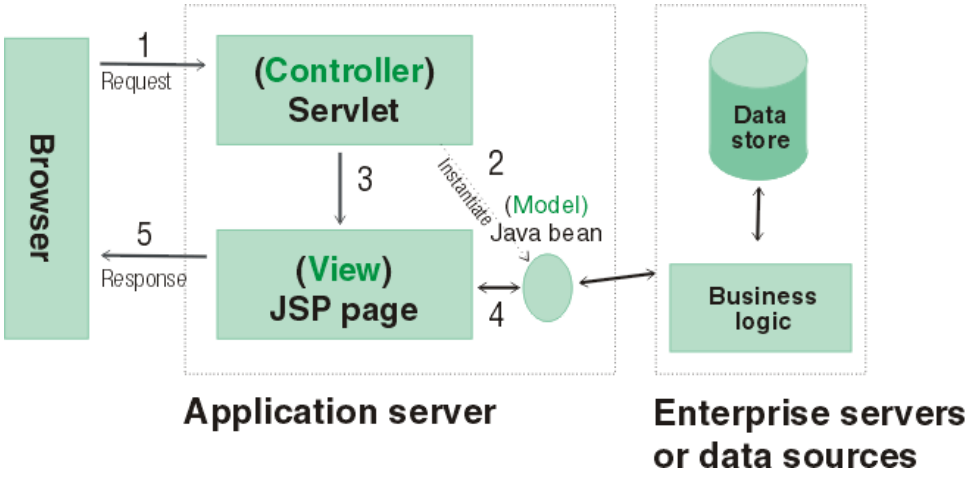
Fact is in 2006 Avada released its first version of Infrared360 because other vendors did NOT address what was coming : IoT

What the heck does this have to do with middleware?!

What needed to be done to take advantage of some *standards* on the way

From 2006 press release:

Infrared360 announces version 1 uses web application design & deployment *standards* – independent of OS!



- Infrared360 announces version 1 leverages in-house security for LDAP authentication and encryption to connections
- These are historical FACTS – Avada Software was *created* because the other vendors at the time didn't address these issues for their customers nor envision how the coming standards required a change to business as usual

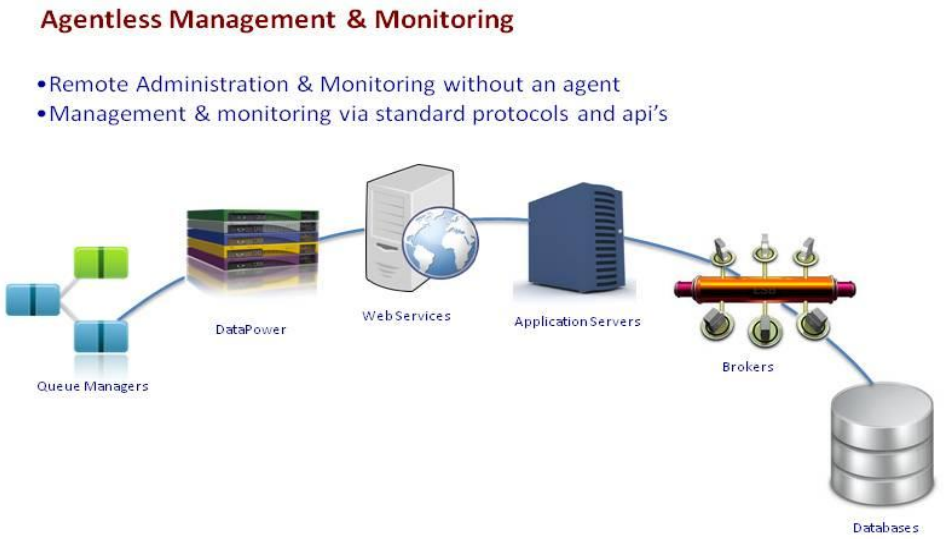
Avada Software

What the heck does this have to do with middleware?!

•And at the time many blogs and posts said agentless would *not* work – yet now after years of telling you that, our competitors are suddenly changing their tune!

From Feb.2006 press release:

Infrared360 announces 1st version : AGENTLESS monitoring & administration



•*Because expecting proprietary code be dropped on every monitoring device was NOT sensible for the future!*

Avada Software

What the heck does this have to do with middleware?!

From 2006 press releases:

- Infrared360 announces 1st version provides CLIENTLESS (BYOD) and

B.Y.O.D.
(Bring Your Own Device)

- *Because installing something on your desktop just to see info was NOT sensible for the future!*

Avada Software

What the heck does this have to do with middleware?!

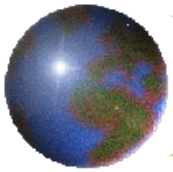
From 2006 press releases:

- Infrared360 announces 1st version facilitates 'secure collaboration' via Groups and Roles

– the pioneering of 'self-service' admin/monitoring

* 

Because <u>people</u> want to determine who sees what, when, and what actions can be taken by whom – even if delegated to someone ELSE!



Avada Software

What the heck does this have to do with middleware?!

Same problem, smaller ecosystem

IoT requires

- device vendors to provide open api for instrumentation
- cannot have proprietary code of each user of info on instrumented device
- information aggregated from devices is assembled to be easily read
- information gathered from devices can be viewed via any browser UI
- information gathered from devices is protected by ‘selected visibility’
- information gathered from devices can be delegated to others by owner

Why so much talk about the internet of all things?

What the heck does this have to do with middleware?!

In order to make sense of the internet of things, there needs to be a way to see only the internet of *relevant* things!

• And let's make sure that only my friend and family that I delegate this visibility to are the Only people who see it – even then I may not want them to take action or self service anything For me!

Avada Software

Why so much talk about the internet of all things?

What the heck does this have to do with middleware?!

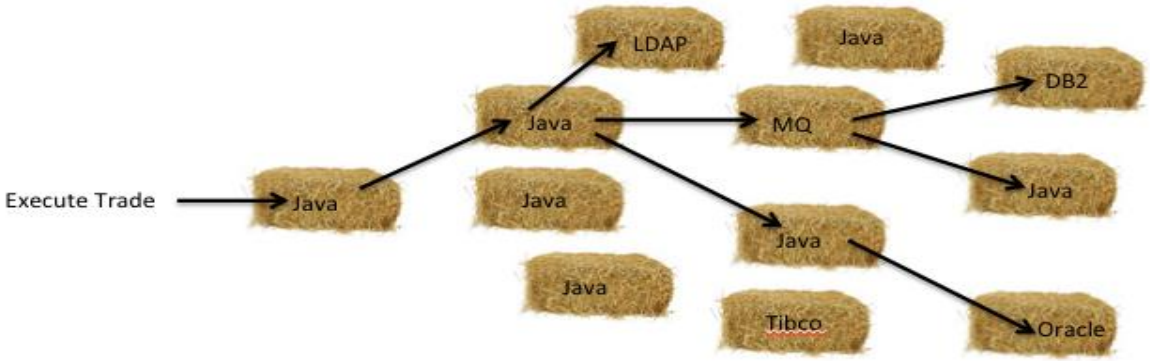
In order to make sense of the middleware of things, there needs to be a way to see only the middleware of *relevant* things!

- Do you really want to see a dashboard of 1000's of devices? Or just be notified when one of them is having problems? Or better yet have that device report data to an engine that will respond to the problem!

Why so much talk about the internet of all things?

What the heck does this have to do with middleware?!

In order to make sense of the middleware of things, there needs to be a way to see only the middleware of *relevant* things!



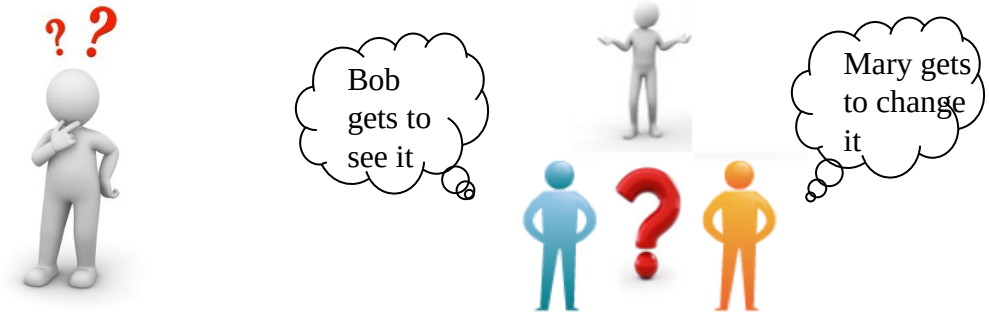
•Or rather make sure that only my line of business and certain people *interfacing* with my line of business are the Only people who see it – even then I may want limit what actions they may take in my behest!

Avada Software

Why so much talk about the internet of all things?

What the heck does this have to do with middleware?!

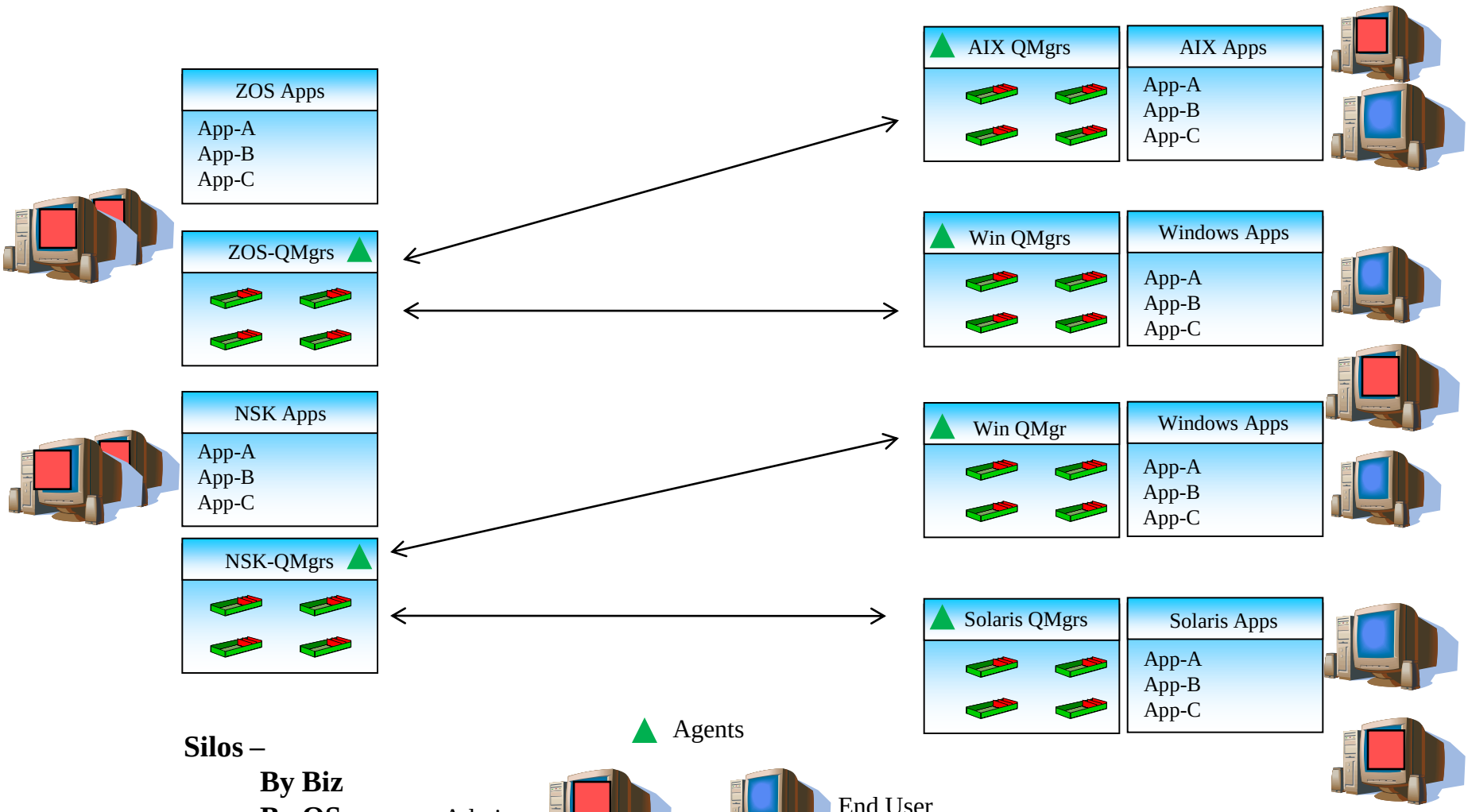
• This is not just 'self-service' ! I've been stuck waiting behind too many people trying to use a kiosk to no avail … where'd the card go? What's it asking for now? What happened to my ticket?



• It is the ability to choose who you delegate actions to and how much and what to prevent them to do – as a 2nd step to delegating what they can SEE.

Avada Software were pioneers of smart self-service for middleware!

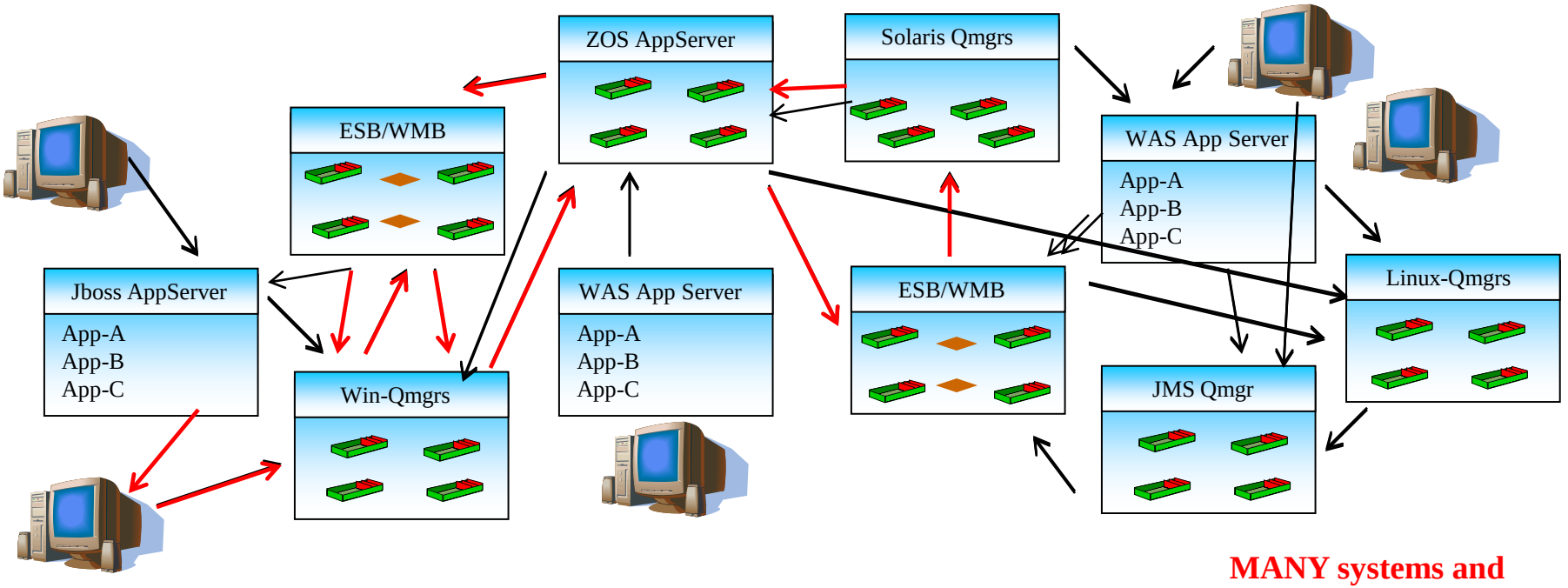
Typical 1990-2000 Enterprise Environment



Silos –

By Biz
By OS
By App

Typical 2005 – 2015 Enterprise Environment



MANY systems and process involved

Solaris **ZOS** **AIX** **Windows** **I-Series** **Linux** **HPUX**

MQ is usually the issue not ESB

Bob SME for ESB

Why am I needed on these calls?

Dave SME for Windows

Let's just fix it so I can do my work!

Jeff SME for Solaris

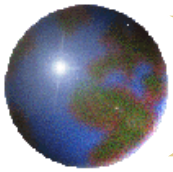
OMG! Not again!

Jane Business Unit Manager

A comparative example...

It's 2014 – people are still managing complex systems with scores of freeware and support packs like they did 20 years ago?! Amazing. Will there be 100's more to use for each IoT device?

- Don't mind rogue tools?
- Don't mind security holes?
- Don't mind OS dependency?
- Don't mind NO support?



Today: *Complex Environments*

Just like we will see as people get their hands around IoT …

There are inherent issues with managing large complex environments:

- Who has access to what servers & what objects? **(security)**
- Who can do what? **(roles, policies, permission)**
- Can other staff work together to resolve issues? **(visibility, sharing)**
- Can other staff take action **(visibility, roles, permission)**
- Ok resolved, who did what, when, and where? **(audit, compliance)**
- Who gets notified & gets to see the resolution. Where is that info stored for knowledge base use? **(visibility, roles, permission, audit, compliance)**

An innovative comprehensive Solution:

... that will save you an *enormous* amount of time managing this complex environment

... with agility, intuitiveness, responsiveness, and collaboration, delegation, and RELEVANCY:

By how much? *The following slide is from a Customer internal Case Study*

Infrared360 Efficiency - Financial

Example ROI for Avada Transportation Customer

40% operational efficiency improvement!!!

MTTR:	Before – 95-96% uptime	**Now – 98-99% uptime**
Incidents:	Before – resolved 1-2 hours	**Now – resolved in 15-30 minutes**

Incident Reduction:	Before – 10 to 15 major outages per year	**Now – 0%**

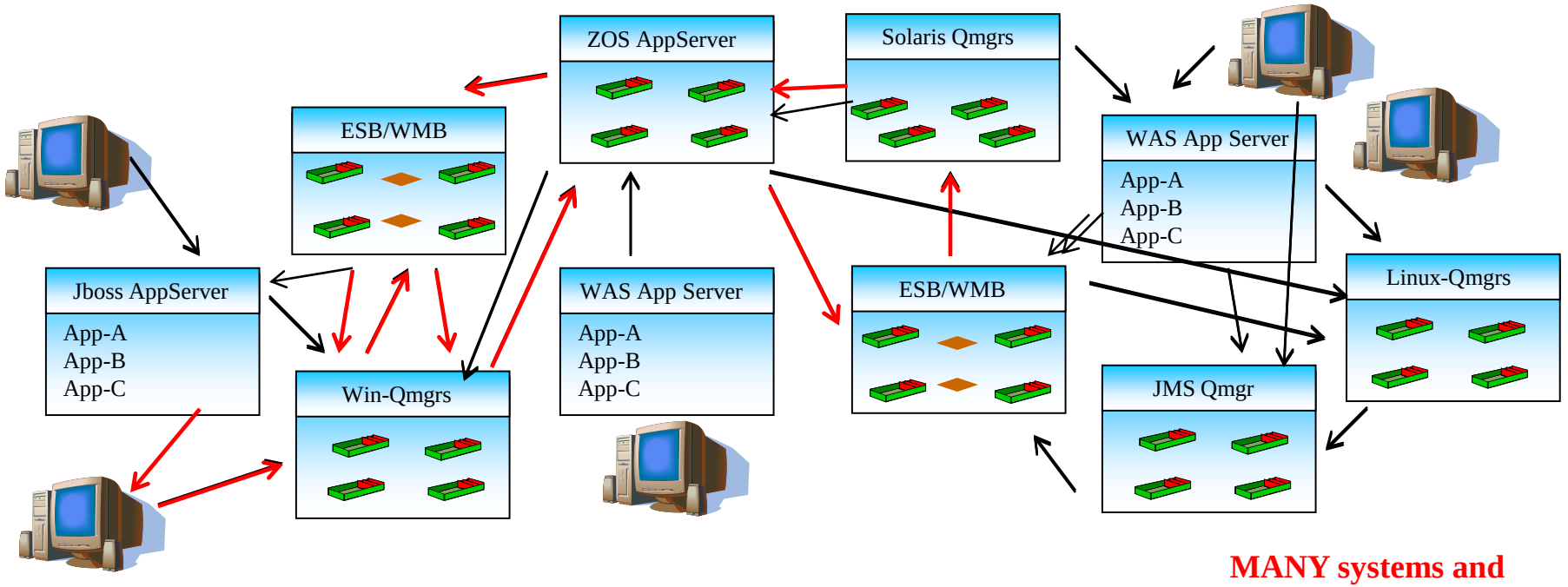
Change/Incident Tickets:	Before – 5 to 10 incidents/wk	**Now – 3-5 incidents/wk**

Direct Cost Impact:

- SLA Penalties reduced: Before – Down time over 30 minutes, average 100-200K per minute **Now - $0**
- Eliminated high maintenance cost for previous products
- Eliminates ALL costs associated with deploying agents

- Resources:
  Before – **19 admins** handling → **800 Endpoints**
  Now – 14 admins handling → 1800 Endpoints
  5 admin free to focus on critical tasks

Middleware of Things managed



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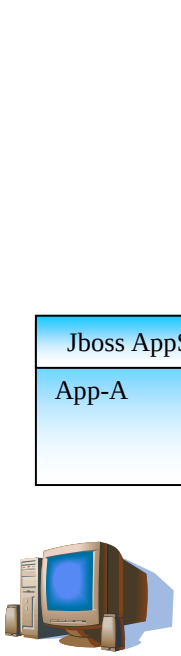
Let's see just the Relevant application



Only ONE application among MANY.

Solaris **ZOS** **AIX** **Windows** **I-Series** **Linux** **HPUX** **NSK**

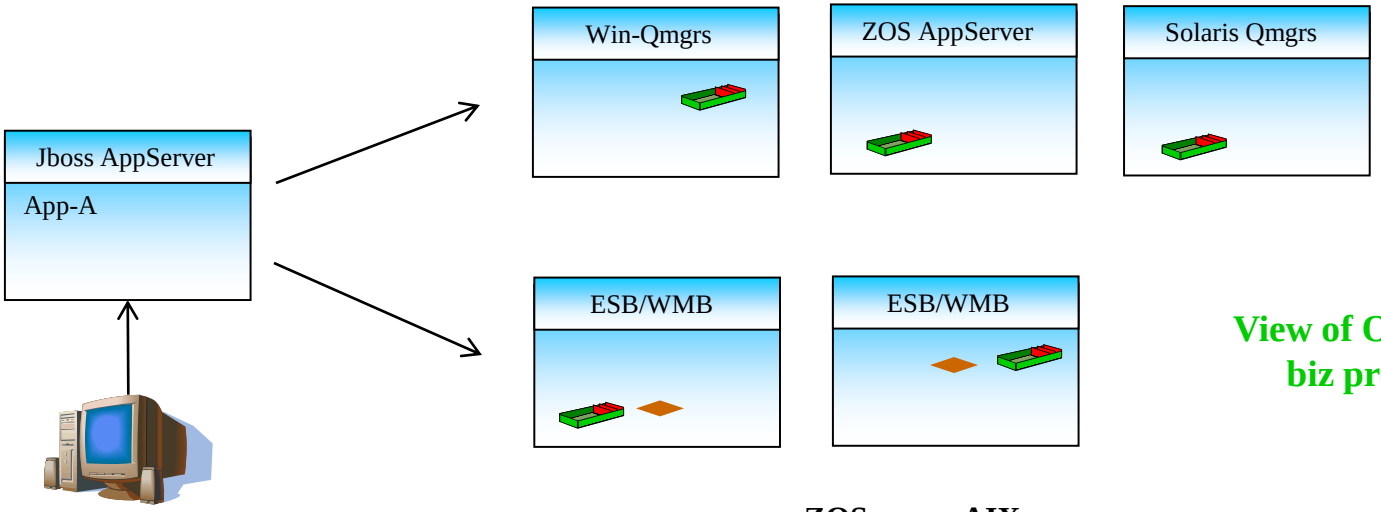
Bob SME for ESB

Dave SME for Windows

Jeff SME for Solaris

Jane Business Partner

Let's organize the relevant application we see



View of Only ONE application or biz process among MANY.

Solaris

ZOS

AIX

Windows

I-Series

Linux

HPUX

NSK

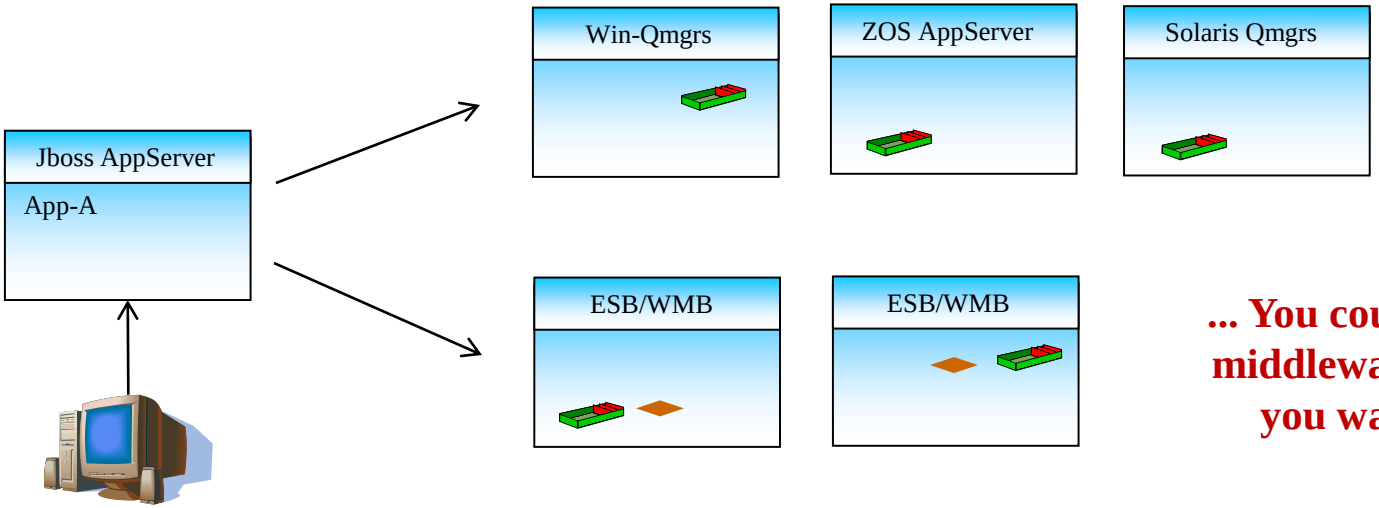
Bob SME for ESB

Dave SME for Windows

Jeff SME for Solaris

Jane Business Partner

Let's delegate visibility & permissions to the relevant application we see



... You could isolate JUST the middleware Application that you want to focus on or support!

Wow, now I can see my ESB…

Bob SME for ESB

Cool – I can see UNIX queues…

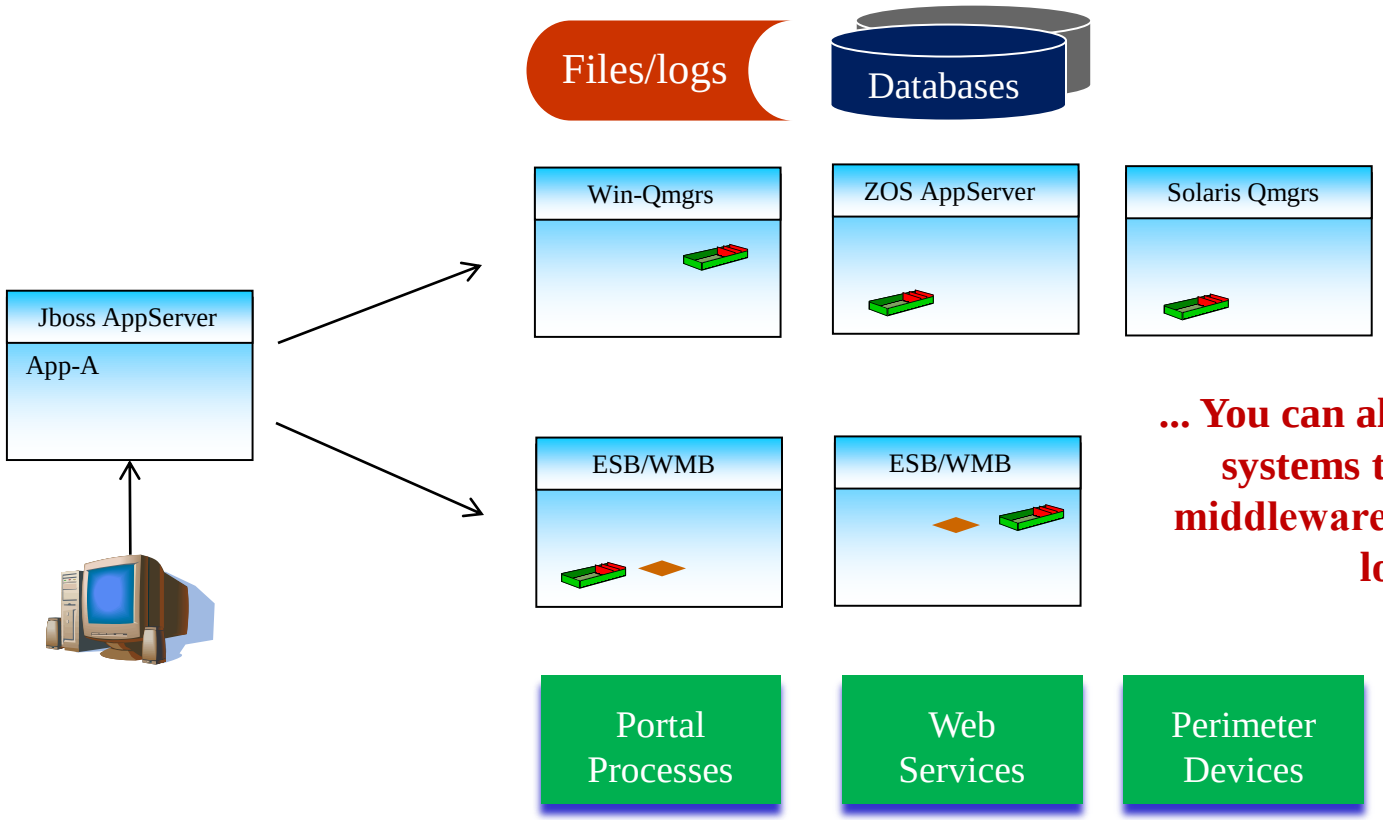
Dave SME for Windows

SEE, this problem <u>is</u> in the ESB

Jeff SME for Solaris

Jane Business Partner

Now we have the Internet of Relevant Things!



... You can also see processes and systems that AFFECT the middleware Application you're looking at.

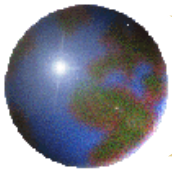
Whew! Much easier to see what it takes to make this particular app work!

Bob SME for ESB

Dave SME for Windows

Jeff SME for Solaris

Jane Business Partner



INFRARED 360

Avada Software

Corporations in North America & EMEA have adopted *Infrared360* and are using it in **mission critical** environments to manage their middleware of relevant things.

Customers include:

4 of the top 7 banks

3 of the top 5 airlines

2 of the top 5 health science companies

2 of the top 5 retirement benefits companies

2 of the top managed services (on behalf of their clients)

Customers also includes Insurance, Utilities, Manufacturing, B2B, Retail,

Why Avada Software for their Enterprise ?

- *Provide a comprehensive, agile, secure, flexible, future-proof Enterprise middleware solution for:* - Administration, Monitoring, Statistical Reporting, Auditing & Testing

Because Infrared360's innovative architecture

- Removes deployment time and cost issues

Because managing the middleware of relevant things:

- Dramatically reduce operating costs for your enterprise middleware environment!

Because Avada Software is continuing to INNOVATE for IoT !!

- We are planning for what's coming next --- not what's been out there the last 10 years

The Internet of Relevant Things

Thank you!

AVADA SOFTWARE
Infrared 360

Work Smarter, Not Harder