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AFTAC Review



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Challenges

- Technology integration with Intelligence Community Cloud
 - Hosting → NSA MACHINESHOP/"IC GovCloud"
 - Data Standards → DoD Discovery Metadata Services
 - Sharing → Distributed Common Ground System IC

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Certification & Accreditation reciprocity for DoD and IC ATO's

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Operate under DoDIIS accreditation policies and procedures
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- Technology Training

Shift to integration services, cloud providers to handle infrastructure

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Intelligence Community Cloud Integration

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Intelligence Community Cloud Integration

- NSA MACHINESHOP providing Intelligence Community hosting
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IT As Manufacturing



Consolidated Aircraft B-52 Liberator

Incredibly sophisticated, ~500K parts,
Assembled by unskilled labor.

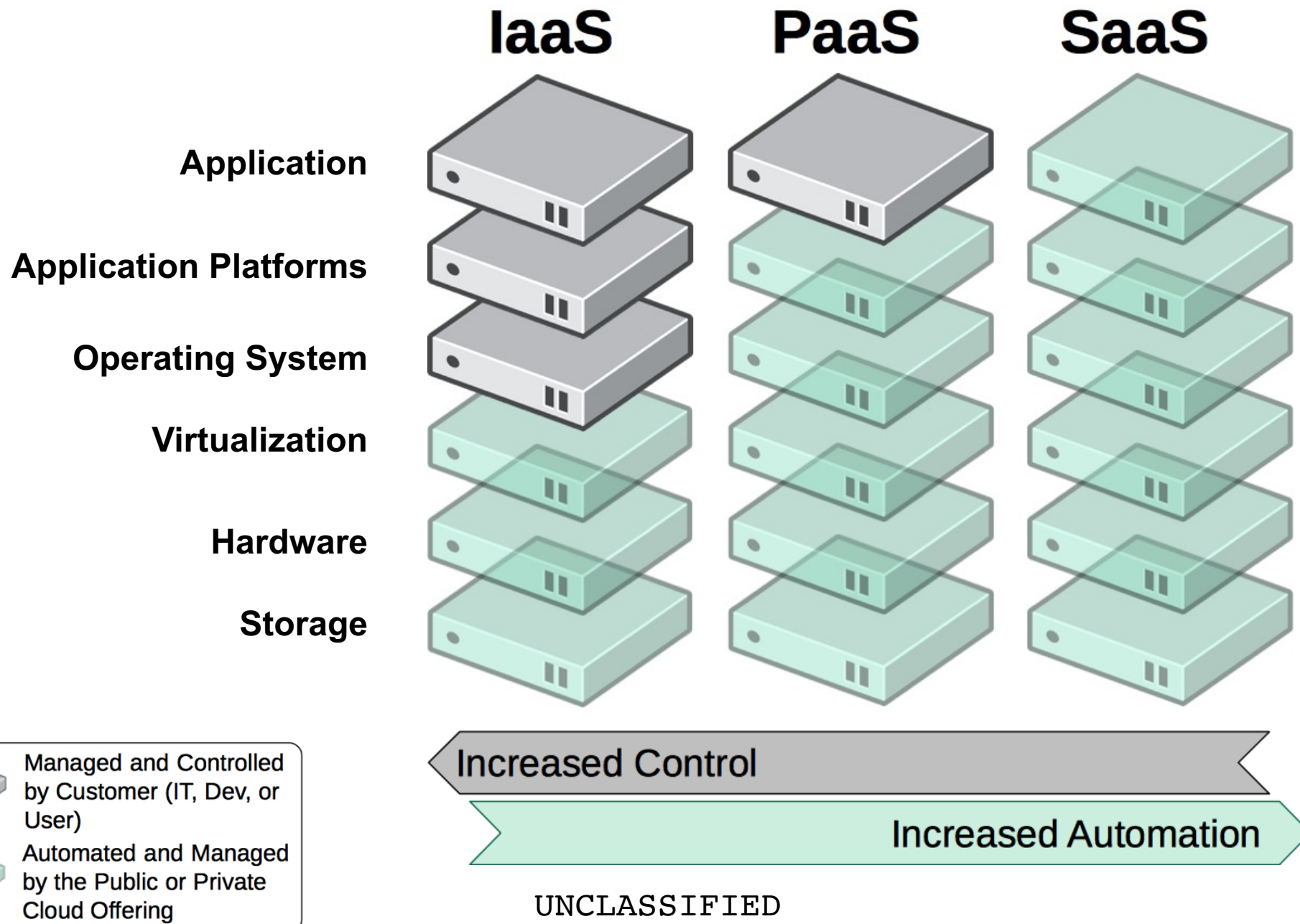
No Mfg. process. Parts were cast in
rubber molds, every part was different.

Ford Motor Co. brought a
manufacturing process, went from 250
planes per year to 650 planes per
month.

Standardization remains our current
challenge.

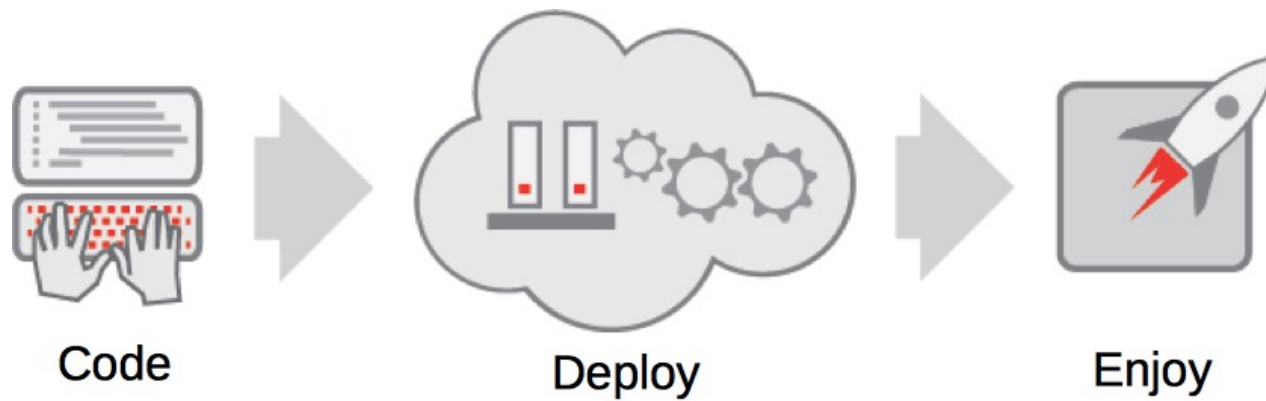
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IaaS provider generates
operating system images

OS IMAGE

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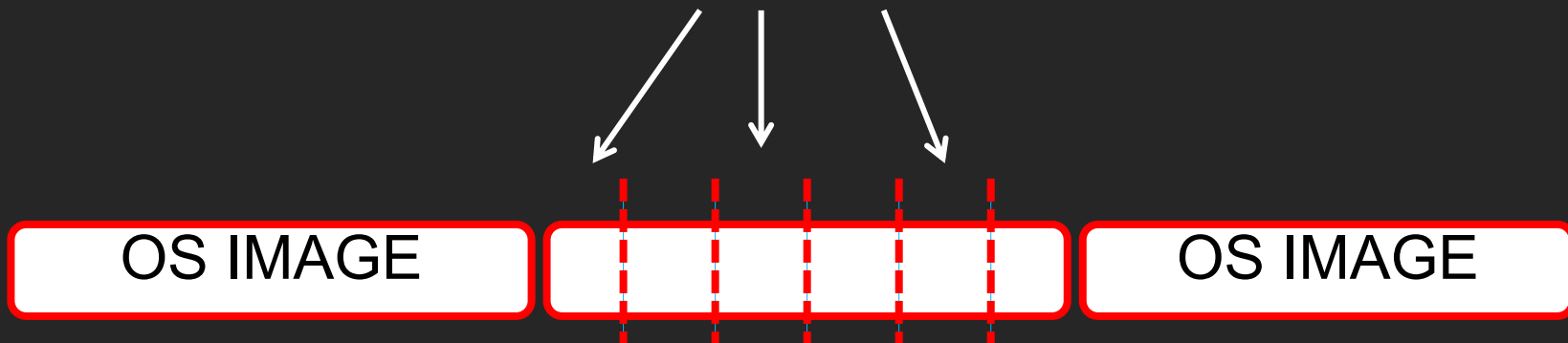
OS IMAGE

MACHINESHOP (IC Classified) / C2S (IC Commercial)
On-Premise (VMWare, Xen, KVM, Bare Metal)

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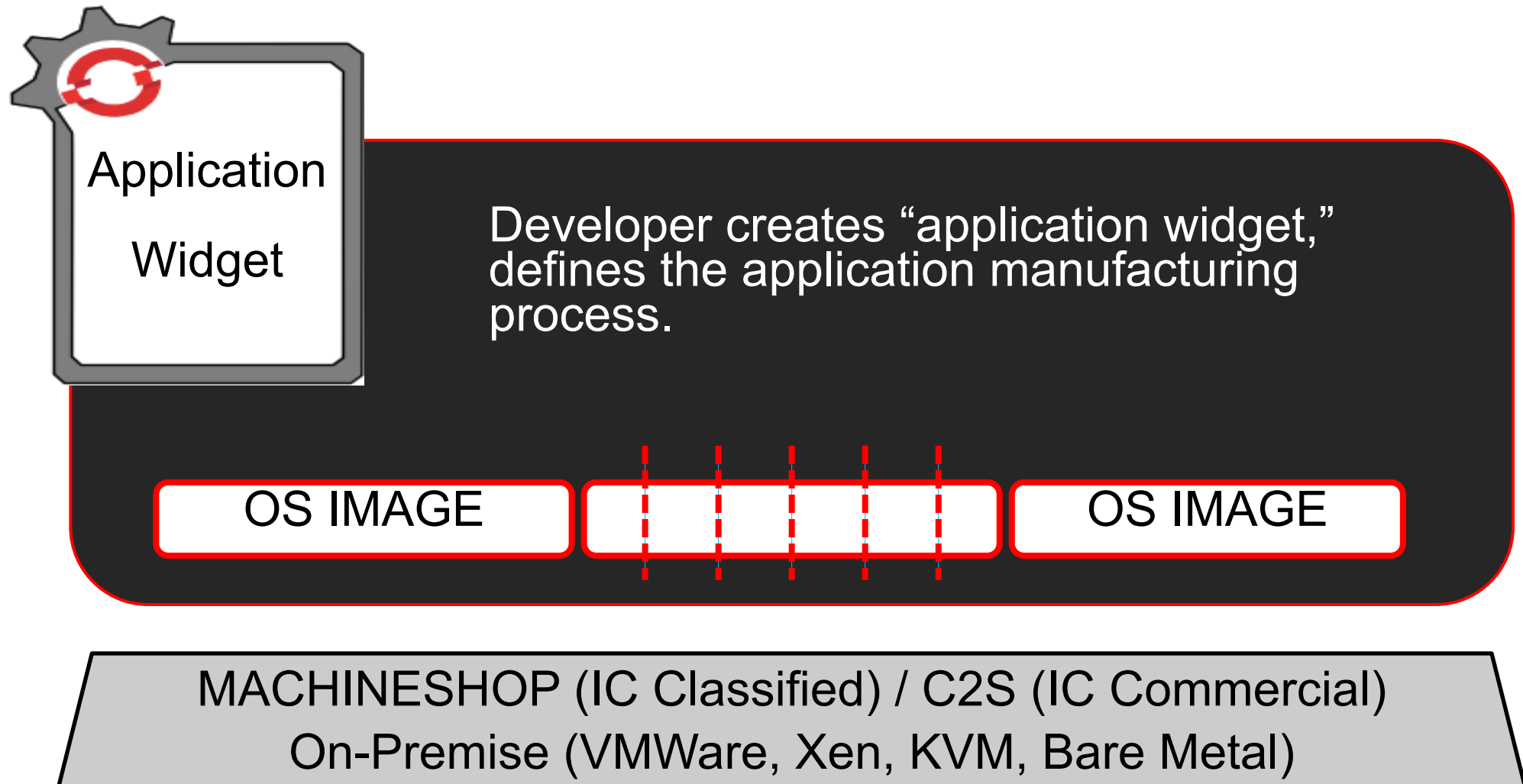
SELinux subdivides the available computing resources using technology co-developed with the NSA



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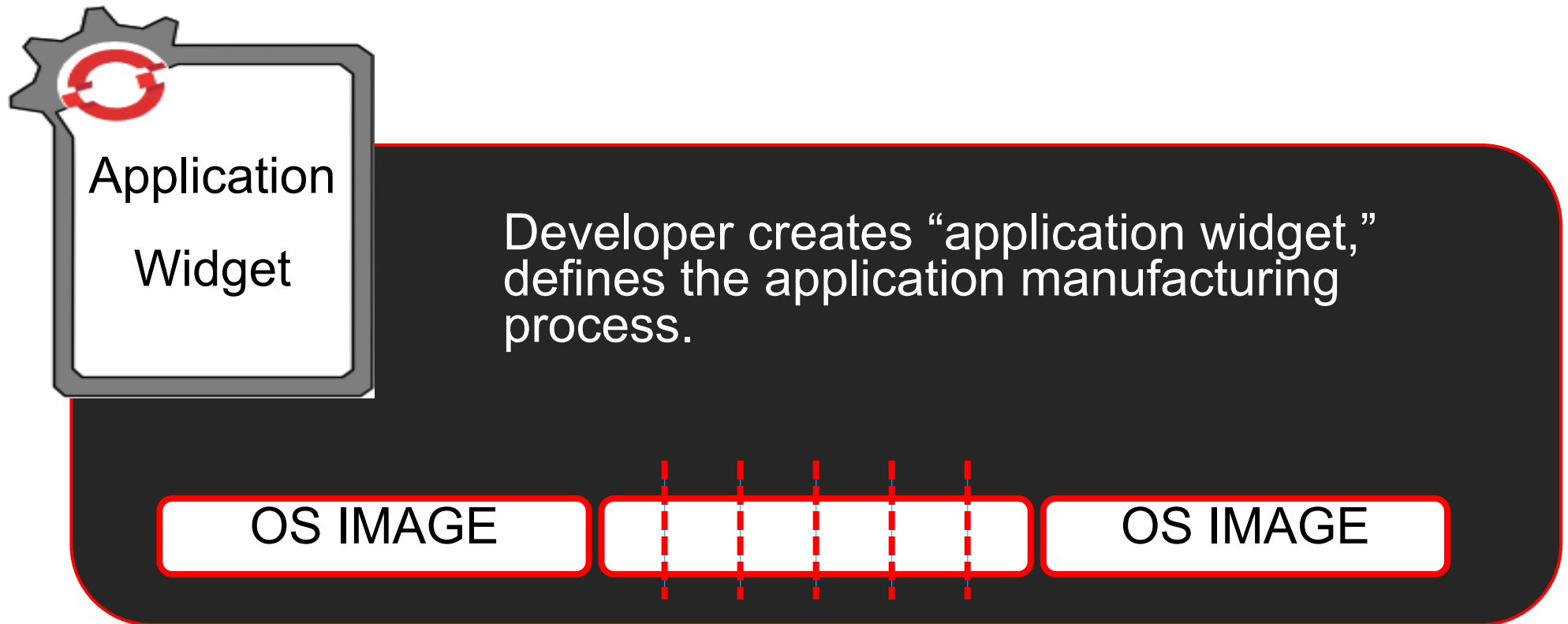
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MACHINESHOP (IC Classified) / C2S (IC Commercial)
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DEVELOPER TOOLS

**Jenkins**

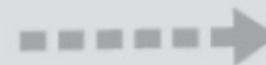
PACKAGED APPS



FRAMEWORKS



LANGUAGES

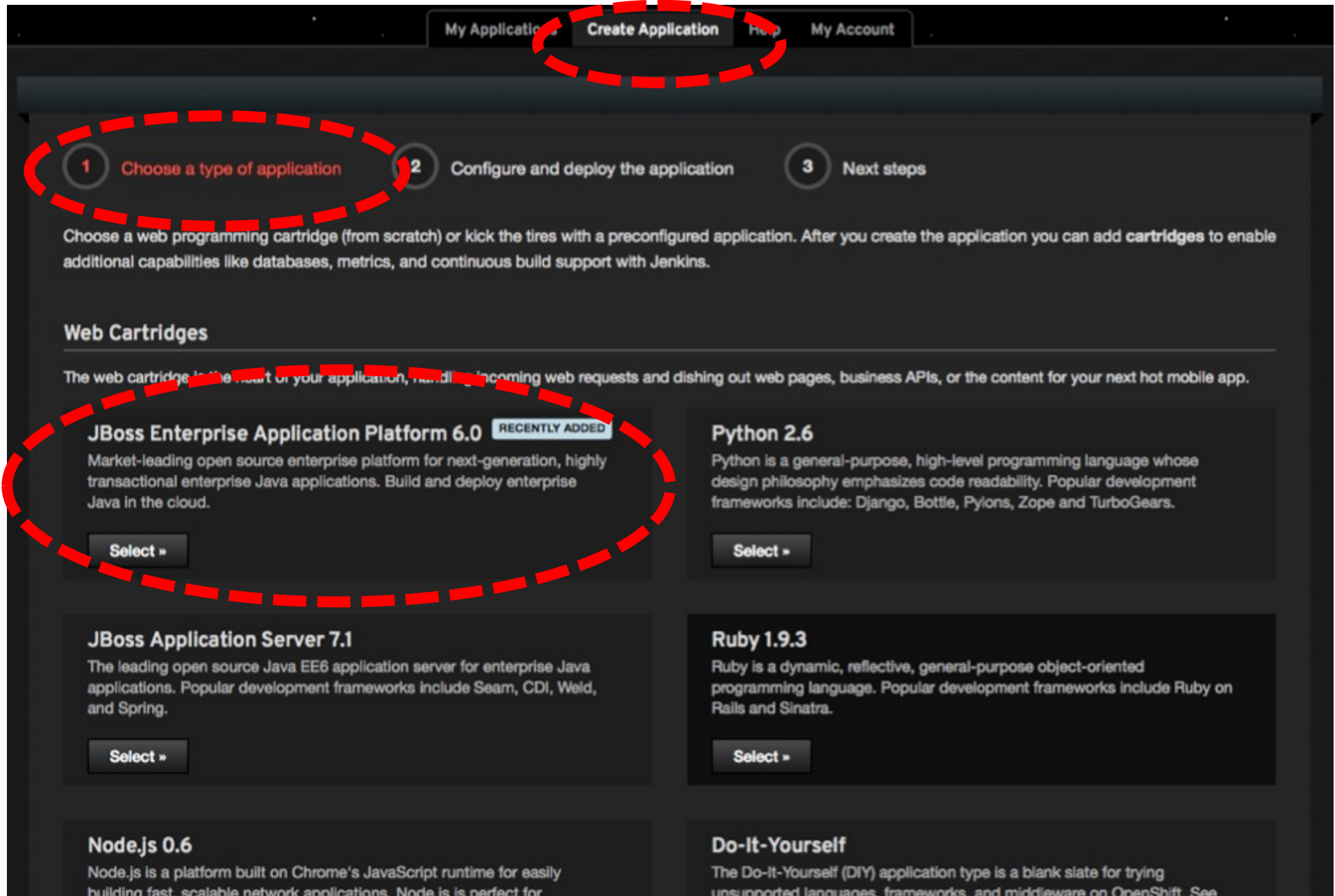
CUSTOM
CARTRIDGES

MIDDLEWARE

Apache
TomcatDATASTORES
& BACKENDS

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My Applications **Create Application** Help My Account

1 Choose a type of application 2 Configure and deploy the application 3 Next steps

Choose a web programming cartridge (from scratch) or kick the tires with a preconfigured application. After you create the application you can add **cartridges** to enable additional capabilities like databases, metrics, and continuous build support with Jenkins.

Web Cartridges

The web cartridge is the heart of your application, handling incoming web requests and dishing out web pages, business APIs, or the content for your next hot mobile app.

JBoss Enterprise Application Platform 6.0 RECENTLY ADDED

Market-leading open source enterprise platform for next-generation, highly transactional enterprise Java applications. Build and deploy enterprise Java in the cloud.

Select »

Python 2.6

Python is a general-purpose, high-level programming language whose design philosophy emphasizes code readability. Popular development frameworks include: Django, Bottle, Pyjamas, Zope and TurboGears.

Select »

JBoss Application Server 7.1

The leading open source Java EE6 application server for enterprise Java applications. Popular development frameworks include Seam, CDI, Weld, and Spring.

Select »

Ruby 1.9.3

Ruby is a dynamic, reflective, general-purpose object-oriented programming language. Popular development frameworks include Ruby on Rails and Sinatra.

Select »

Node.js 0.6

Node.js is a platform built on Chrome's JavaScript runtime for easily building fast, scalable network applications. Node.js is perfect for

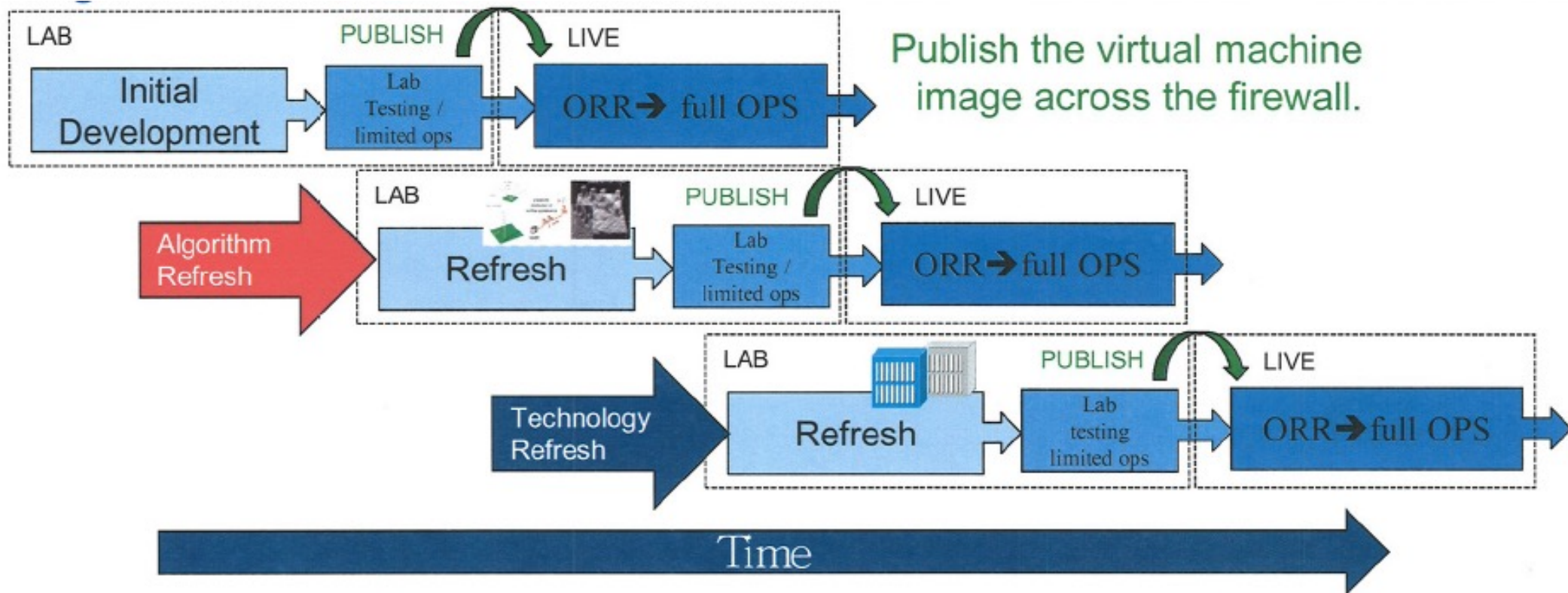
Do-It-Yourself

The Do-It-Yourself (DIY) application type is a blank slate for trying unsupported languages, frameworks, and middleware on OpenShift. See

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Application Widget Refresh



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Integrating with Ground Enterprise Directorate (GED)

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Integrating with Ground Enterprise Directorate

- HPC resources available through dynamic provisioning (private NRO GED cloud)
 - Resources available remotely for operations, prototypes, experiments, and disadvantaged users
 - Dynamic resource pooling
 - Currently accepting initial workloads

Classified Testbed

- 1x SGI UV100
Intel Xeon Nahalem, 256 cores
>1TFLOPS peak
- 10x TILEmpower boards
Tilera TILEPro64, 640 cores
>4 TFLOPS peak
- 3x TESLA 2050s
Nvidia Fermi GPUs, 5376 cores
> 4TFLOPS peak

Unclassified Testbed

- 1x SGI UV100
Intel Xeon Nahalem, 128 cores
- 10x TILEmpower boards
Tilera TILEPro64, 640 cores
- 3x TESLA 2050s
Nvidia Fermi GPUs, 5376 cores
- Commodity x86 cluster
Intel Xeon Clovertown, 80 cores

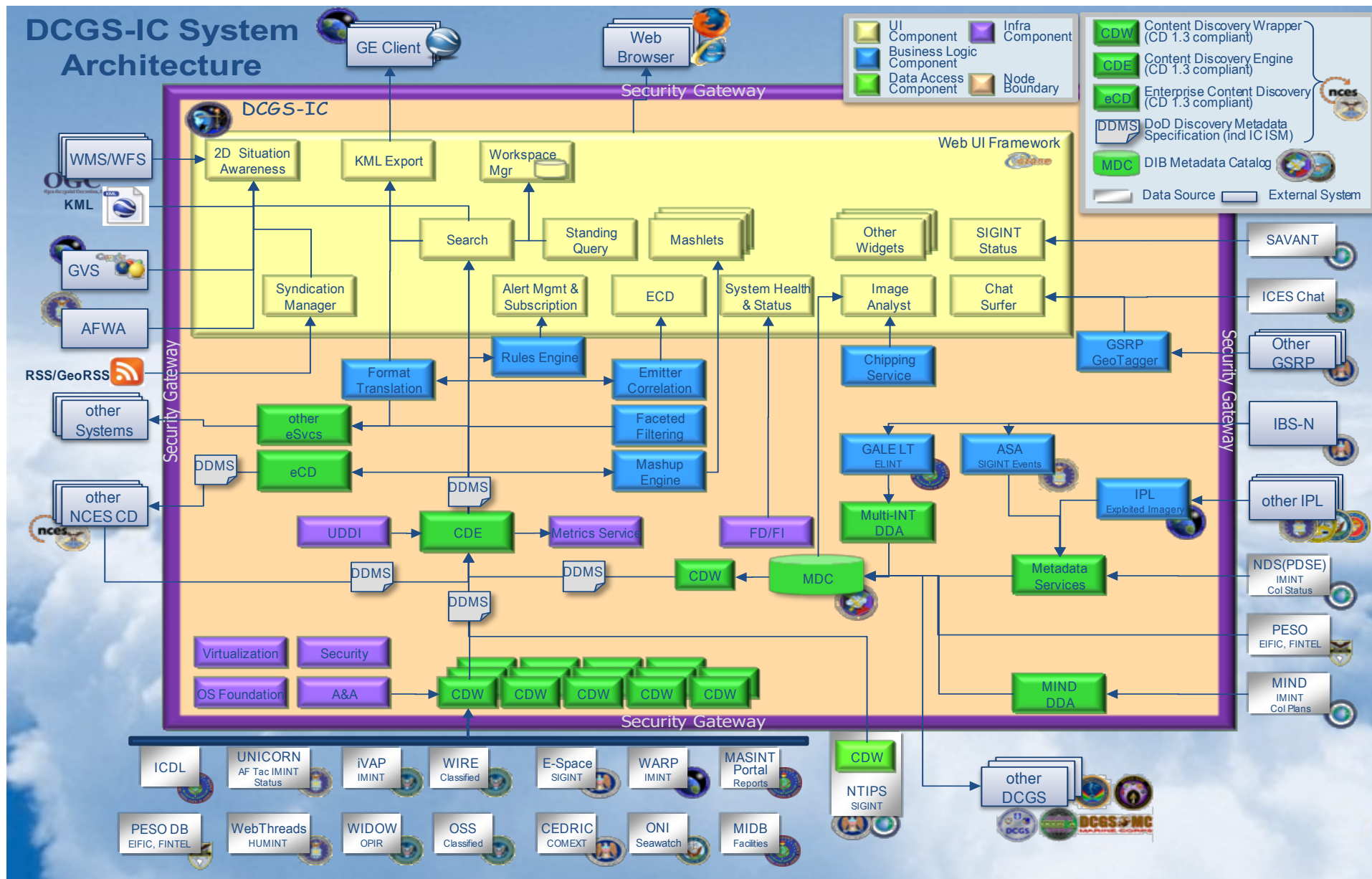
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Intelligence Data Sharing

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Intelligence Community Data Standards

- DoD Discovery Metadata Specification (DDMS)
 - Defines discovery metadata elements for all resources posted to community and organizational shared spaces
 - Mandated by DCGS, powers metadata catalog and the DGCS Integration Backbone (DIB)
 - Integrates with IC Trusted Data Format (TDF), supports:
 - IC-TDF
 - Information Security Metadata
 - Need-to-Know
 - IC-Commons
- <http://metadata.ces.mil/dse/irs/DDMS/>

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Ozone Widget Framework



“A framework for visually organizing and laying out lightweight web applications (widget) within a user’s browser.”

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Ozone Widget Framework

OZONE Widget Framework (OWF)

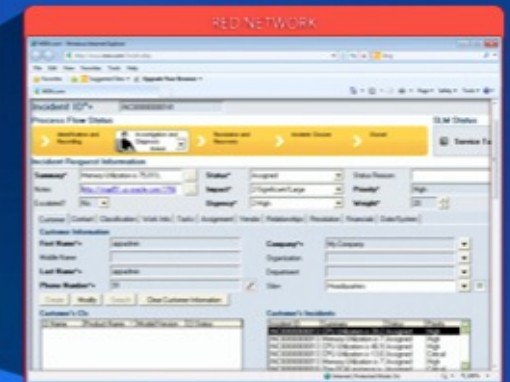
- Framework for visually organizing and laying out lightweight web applications (widgets) within user's browser.
- Provides infrastructure services to facilitate development of workflows and presentation-tier application integration.

OZONE Marketplace (OMP)

- Thin client registry of applications and services similar to commercial application stores.
- Can be utilized with OWF or as an independent application.

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Fused Product Generation



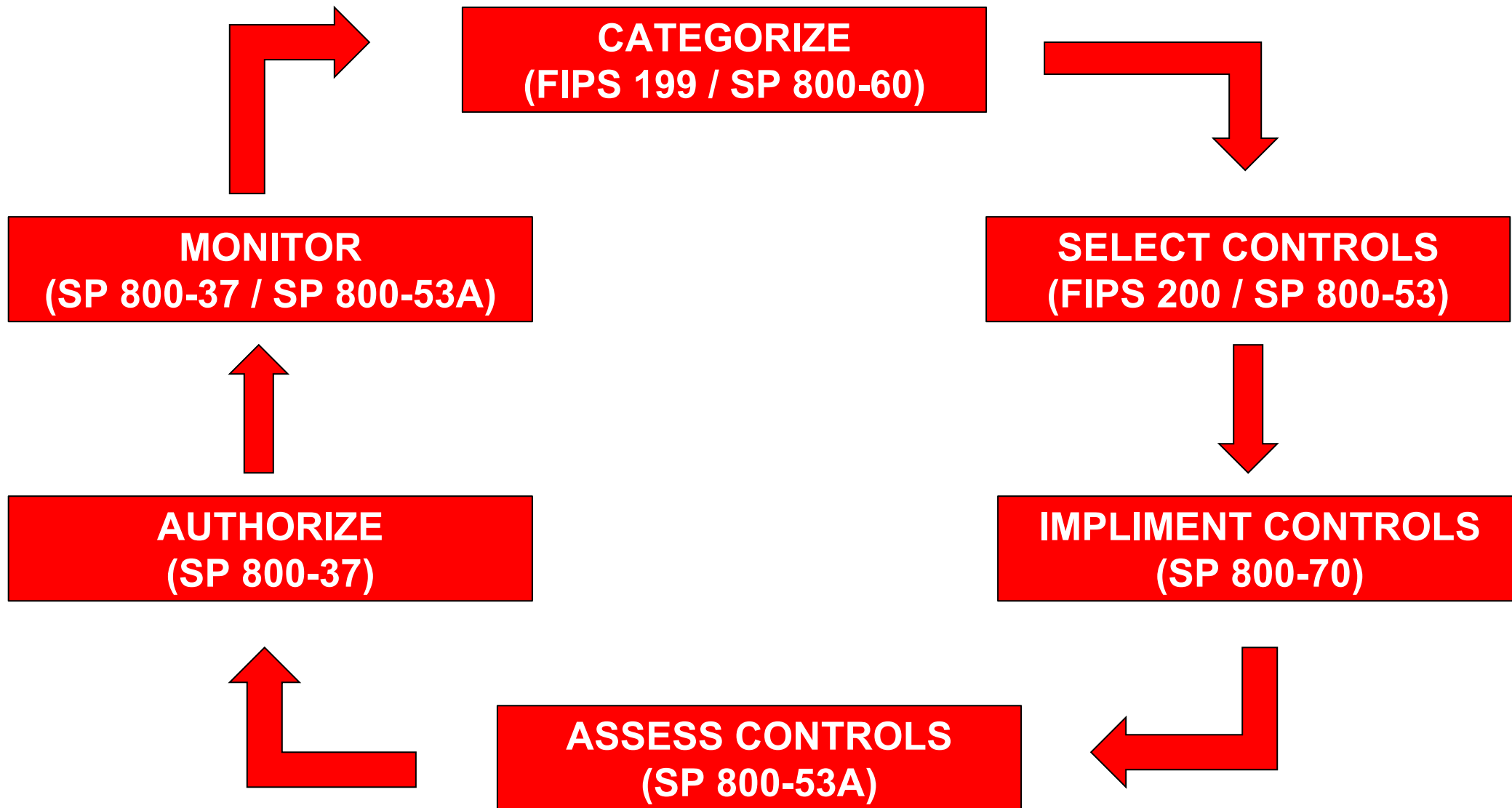
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Security

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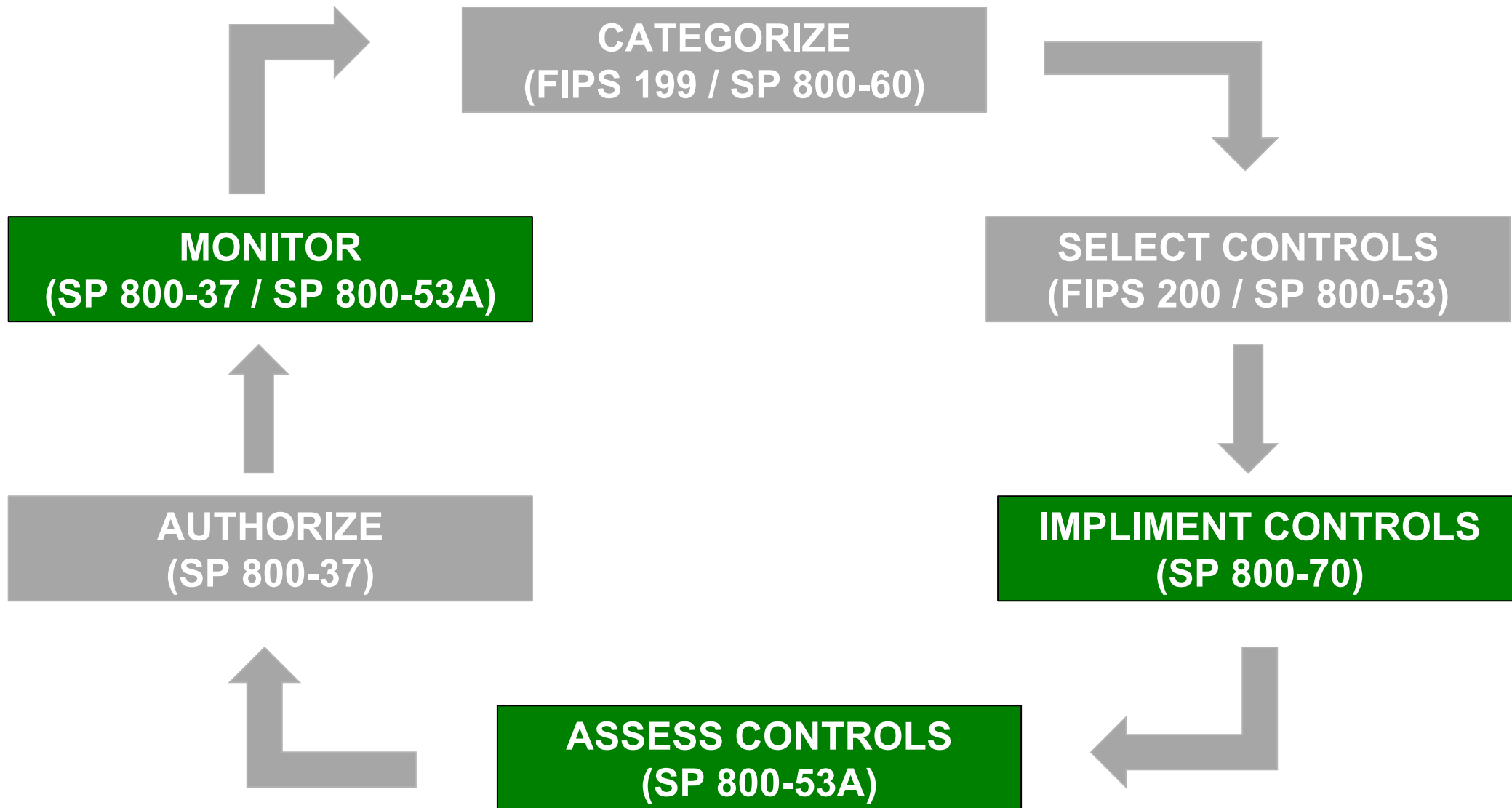
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