Keeping IT Real:
What Virtualization is doing
(or will do) to your ITIL® Road Map

MyServiceMonitor
ITSM On-Ramp Services

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ITSM ACADEMY
...educate & inspire®

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About ITSM Academy

ITSM ACADEMY
...educate & inspire®

- Accredited Education
  - ITIL® Foundation (V3 / V2)
  - ITIL® V3 Foundation Bridge, Managers Bridge
  - ITIL® V3 Lifecycle, Capability and MALC
  - ITIL® V2 Practitioner, Service Manager
  - Microsoft Operations Framework (MOF) Foundation
  - ISO/IEC 20000 Foundation
  - Certified Process Design Engineer (CPDE)®
  - Practical, Value-Add Workshops

- Ft. Lauderdale, Dallas & Washington, DC - Public
- Corporate on-site Classes
- Virtual Classes
- Courseware Licensing
- Alumni Program
- PMI Global Registered Education Provider
- Federal Government (GSA) Contractor
- Certified Woman-Owned
- Tens of thousands of learners trained since 2003

Welcome!

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About **MyServiceMonitor**, LLC

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  ♦ ITSM Academy Instructor
  ♦ ITIL Expert™, PMP, CISA,CPDE, ISO/IEC 20000 Certified
  ♦ 30 years in IT
  ♦ **ITSM On-Ramp™ Services**

    • Training & Assessment
    • Implementation Workshops
    • Project Management

  ♦ ITSM On-Ramp™ Services leverage intelligent service monitoring, best practice guidance and key international standards

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Agenda

♦ **<u>A Virtual Reality Check</u>:**
  Virtualization, IT and the Business

♦ **<u>ITSM Road Maps</u>:**
  ITIL® Version 2, Version 3 and Virtualization

♦ **<u>Keeping IT Real</u>:**
  The Right Road to ITSM Excellence

A Virtual Reality Check

Virtualization, IT and the Business
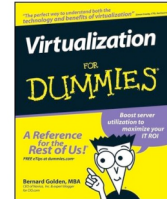
Virtualization Defined

♦ **Vir·tu·al** - "*Practically; Almost, but not quite; In essence but not in fact*"

SearchServerVirtualization.com

♦ Virtualization is the creation of a virtual (rather than actual) version of something, such as an operating system, a server, a storage device or network resources

♦ ["*…virtualization is much more than the latest technology fad…*"] - Bernard Golden, CEO Navica

Virtualization for Dummies

♦ Provides a good definition of virtualization, its drivers and some warnings…

   ♦ *"Virtualization is actually a simple concept made complex by all the exceptions that arise in particular circumstances.*"

♦ Get Chapter 1 FREE

http://media.techtarget.com/searchServerVirtualization/downloads/Virtualization_FD_Chapter_1.pdf

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Virtualization Drivers

Moore's Law not only enables virtualization, but effectively makes it mandatory. Otherwise, increasing amounts of computing power will go to waste each year.

1. Hardware is underutilized

2. Data centers run out of space

3. Energy costs go through the roof

4. System administration costs mount

Types of Virtualization

- Client Virtualization
  - Application Packaging
  - Application Streaming
  - Hardware Emulation

- Server Virtualization
  - OS (containers)
  - Hardware Emulation
  - Para-virtualization

- Storage Virtualization
  - Direct-Attached Storage
  - Network-Attached Storage
  - Storage Area Network

- Assumes data centers have strict procedures about what software is loaded on computers

- This is where most of the virtualization action is, but the approach needs to match customer requirements

- More applications, more servers mean more storage; this is driving data to virtualization as well

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What IT is hearing…

- The Virtualization hype…
  - Every vendor seems to be 'virtualization ready'
  - Operational management challenges
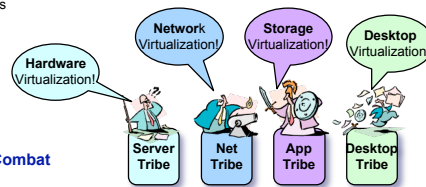 - Potential for virtual sprawl
  - **Complexity!**

NETWORKWORLD

People, process limitations hamper x86 virtualization, IBM security expert says
Virtualization opens new attack surfaces, regulatory risks

Search DataCenter.com
Managing server virtualization complexity

eWEEK.COM
Cross-Platform Tools Needed to Combat Virtualization Sprawl

CIO

Network Virtualization!
Storage Virtualization!
Desktop Virtualization!
Hardware Virtualization!

Server Tribe
Net Tribe
App Tribe
Desktop Tribe

# What the Business is hearing…

♦ The Virtualization hype…
  ♦ Reduced Datacenter footprint (Power)
  ♦ Improved Availability and Continuity
  ♦ Greater Server Utilization
  ♦ Faster, Simpler Installations
  ♦ **Consolidate!**

IDC
Analyze the Future

-Reduction of total annual server costs per user of up to 35%
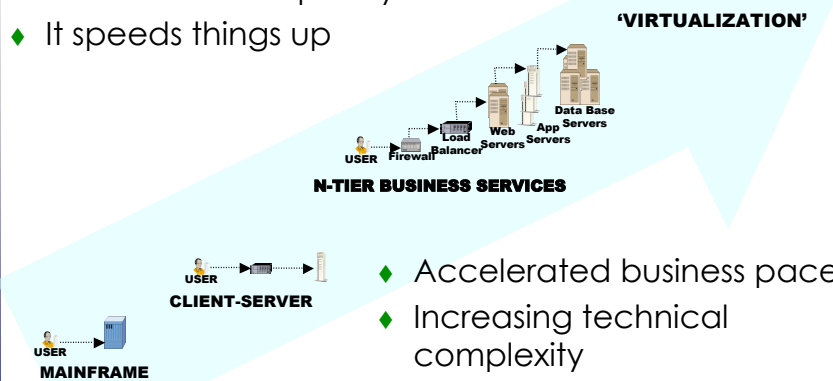
- Use of 'advanced virtualization' and systems management tools can deliver up to 52% per user per year

Business Value of Virtualized Deployment: Total Annual Costs

■ Unvirtualized
□ Basic virtualization
■ Advanced virtualization

Source: IDC's Business Value of Virtualization Research, 2008
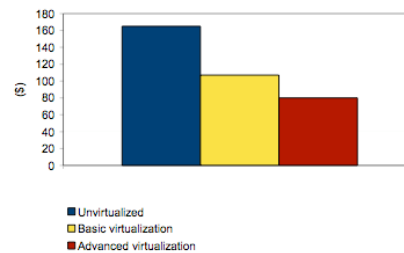
The more things change…

♦ Virtualization is technology
♦ It increases complexity
♦ It speeds things up

'VIRTUALIZATION'

Data Base Servers
App Servers
Web Servers
Load Balancer
Firewall
USER

N-TIER BUSINESS SERVICES

USER
CLIENT-SERVER

USER
MAINFRAME

♦ Accelerated business pace
♦ Increasing technical complexity

The more they stay the same…

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IT Service Management remains Critical

- ITSM Deployment Strongly Correlates With Virtualization and Consolidation Success - Ovum Study of 300+ North American IT decision makers

    - ["...*the complexity of these (virtual) dynamic architectures requires customers to adopt an end-to-end services view of IT operations and service levels*."]

- Almost all ITIL® and Service Management functions are impacted by a move to a virtual infrastructure

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Importance of ITSM in Virtual Environments

- A new technology won't improve poor process or a lack of effective governance

- Automating a bad process may only accelerate failure

- Opportunities for alignment and innovation may be missed without a service lifecycle approach

Virtual Reality Check

♦ Virtualization is not new, it dates back to the 1960's…but *it has reached a tipping point*

♦ Saying we're "*Virtualization Ready*" is like saying we're "*ITIL®-Compliant*"… it's only relevant in the context of *your* needs

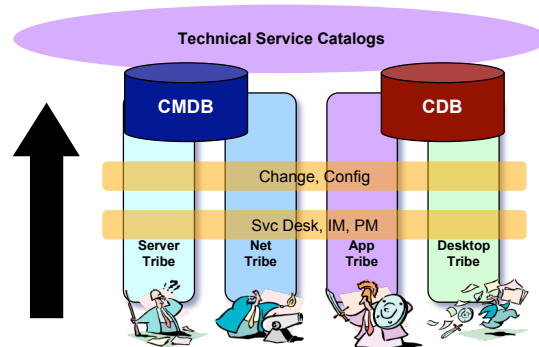♦ Each customer environment is different … developing an overall *strategy* is critical

ITSM Road Maps

ITIL® Version 2, Version 3 and Virtualization

ITIL® Road Maps - Version 2

- ◆ **ITIL® Version 2**
  - ◆ Provided us with a Process Framework
    - ✓ **C**onfiguration **M**anagement **D**ata **B**ase
    - ✓ Focus on Workflows
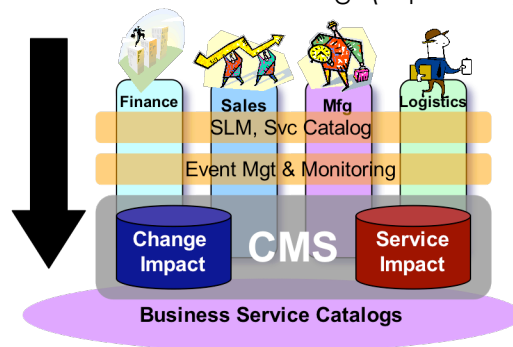   - ✓ IT Service Catalogs (Bottom-Up)

ITIL® Road Maps - Version 3

- ◆ **ITIL® Version 3**
  - ◆ Provides us with a Service Lifecycle
    - ✓ **C**onfiguration **M**anagement **S**ystem
    - ✓ Focus on Performance
    - ✓ Business Service Catalogs (Top-Down)

ITIL® Version 3 and Virtualization

♦ What does ITIL® Version 3 say about virtualization?

　　♦ *"Remote monitoring, control and management equipment and systems will be essential to manage a virtualized environment, as many services will not be linked to any one specific piece of equipment."*

　　　- ITIL® Service Operations, page 101

Key Road Signs for Virtualization

♦ **Event Management**

　　♦ The Event Management process must detect Events, make sense of them and determine the appropriate control action

　　♦ It is the basis for operational monitoring & control, service assurance, service reporting and service improvement

　　♦ Event Management spans all functional units
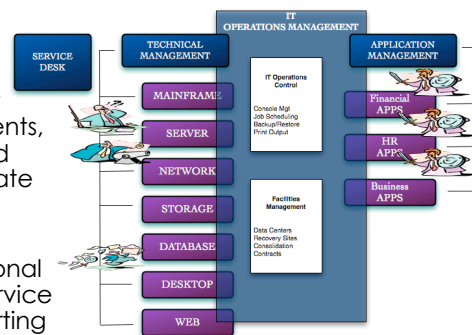
Monitoring & Event Management are closely related

Lack of service-oriented monitoring inhibits ITSM adoption and cultural transformation

Key Road Signs for Virtualization

["Too few IT organizations can monitor performance of the infrastructure and proactively take action to prevent problems. In the virtualized future, these previously unaddressed tasks will become the primary focus of IT operations.

Managing the IT infrastructure from a higher-level perspective will require new skills in areas such as capacity planning and monitoring. For many system administrators, this situation will require a skill upgrade and a shift in perspective from tactical to strategic."]

-*Virtualization for Dummies*
Bernard Golden

- Service Strategy
  - Virtualization should not be implemented 'piecemeal'; an overall strategy is critical

  - Portfolio Management
  - Demand Management
  - Financial Management

- Service Design
  - Warranty Processes:
    - ✓ Capacity, Availability, Continuity, Security
  - SLM, Catalog Management

Road Map Reality

- Some efforts at ITIL® V2 resulted in frustration
  - CMDB Madness
  - 'Bottoms-Up' service definition
  - Marathon-like pace

- Virtualization presents another opportunity to drive change
  - Virtualization creates a sense of urgency
  - Will require that processes be re-visited
  - ITIL® V3 offers relevant guidance
    - ✓ CMS leaves room for innovation, real-time data
    - ✓ Greater emphasis on 'Top-Down' service definition

- Cultural change remains the biggest obstacle to success - *How do we drive a services orientation?*

Keeping IT Real

The Right Road to ITSM Excellence

Stick to the Fundamentals

- ◆ Training
  - ◆ ITIL V3 has guidance relevant to virtualization
    - ✓ Lifecycle - Svc Strategy, Design, Ops
    - ✓ Capability - SOA, OSA, PPO

- ◆ The CSI Model still applies!
  - ◆ Ongoing Assessment must be part of the journey i.e., "*Where Are We Now*?"

- ◆ Continue to address cultural hurdles
  - ◆ Domain-based monitoring inhibits adoption of IT Service Management
  - ◆ Virtualization may present an opportunity to re-engage and address long-standing issues

Virtualization requires Event Management Automation

The fact is, too many IT departments are likely to follow the same path with virtualization that they did with SANs a few years back, and IP networks before that: deploying a technically-elegant solution and finding that <u>without the right management tools</u>, they've just sent themselves over a cliff at 60 mph instead of 30 mph.

– Richard Scannel, GlassHouse Technologies

"A majority of IT departments are deploying virtualization, but still most don't feel comfortable with the tools and technologies they have in place to manage application performance or troubleshoot problems in the virtual environment ...**when asked what the primary troubleshooting problem was, 78% said identifying the problem source**."

NETWORKWORLD Network/Systems Management Alert

Event Mgt Automation requires Service Monitoring Intelligence

Expect Performance Management Databases in the Future
19 February 2008

♦ In IT operations, all the hype is around configuration management databases as the means to solve all problems. Eventually, another management database related to performance and availability will emerge.

Gartner.

♦ Virtual environments need comprehensive and sophisticated performance monitoring tools that understand the whole environment – physical and virtual – and that can track, analyze, and prevent problems across the end-to-end IT service infrastructure.

EMA

Implementing Automated Event Management

By focusing on two to three business services and mapping all the infrastructure components, users will achieve a higher level of success and faster return on investment (ROI)

Gartner.

Beware of the various stakeholders who will make requests that will expand the use and definition of the CMDB too quickly; thereby making the project more complex than it should be in the early stages.

Our modern problems, both social and technological, are 'wicked' … you don't understand the problem until you have come up with a possible solution.

So much for a linear sequence of stages from problem definition to final solution! Instead the process is inevitably 'opportunity driven', requiring a new set of skills and tools to make sense of the chaos.

Dialogue Mapping: Building Shared Understanding of Wicked Problems
by Jeff Conklin

- ♦ Ultimately a 'top-down' definition of service will be required

- ♦ Scoping & targeting are critical when dealing with *Wicked Problems*

- ♦ Rapid installation & implementation of the monitor is critical

- ♦ Consider SaaS, POCs

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Real World Success & Failure

♦ **Good…**

- ♦ Identified service targets, key transactions

- ♦ Carefully orchestrated stakeholder involvement

- ♦ Conducted POC, process integration

- ♦ **Reduced burden on Level 3/4 staff by 50%**

♦ **Not so good…**

- ♦ Service targets, transactions not identified

- ♦ Key stakeholders uninvolved or antagonistic

- ♦ Lack of related processes

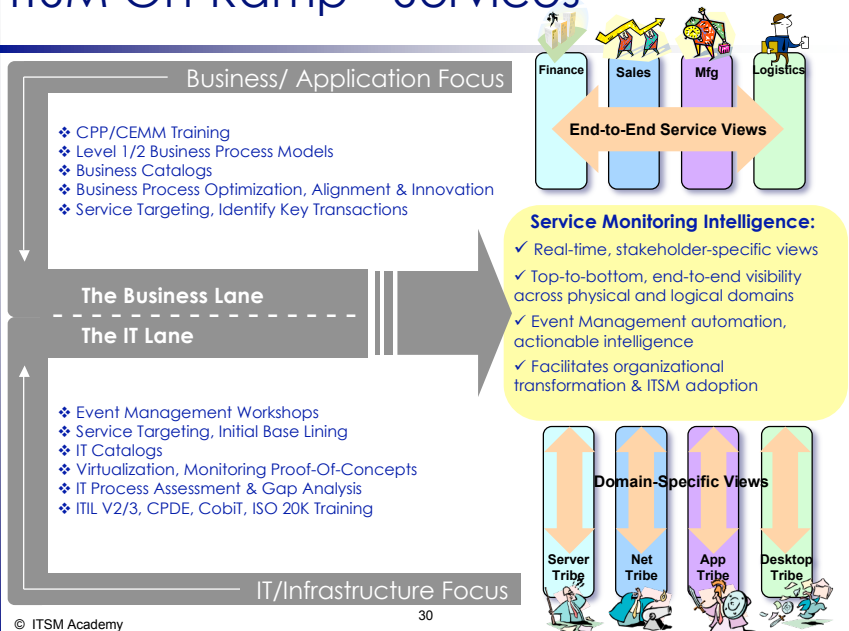- ♦ **Failed, stalled or significantly reduced benefits**

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Cultural Transformation

> "When the team saw the multiple technologies making up the application (service) in context they were able to compare the performance with one another, resulting in helping other teams resolve an unusual problem….when other support teams heard about this capability, they wanted access to the monitor as well."

ITSM On-Ramp™ Services

Business/ Application Focus

- ❖ CPP/CEMM Training
- ❖ Level 1/2 Business Process Models
- ❖ Business Catalogs
- ❖ Business Process Optimization, Alignment & Innovation
- ❖ Service Targeting, Identify Key Transactions

The Business Lane

The IT Lane

- ❖ Event Management Workshops
- ❖ Service Targeting, Initial Base Lining
- ❖ IT Catalogs
- ❖ Virtualization, Monitoring Proof-Of-Concepts
- ❖ IT Process Assessment & Gap Analysis
- ❖ ITIL V2/3, CPDE, CobiT, ISO 20K Training

IT/Infrastructure Focus

Finance | Sales | Mfg | Logistics

End-to-End Service Views

Service Monitoring Intelligence:
- ✓ Real-time, stakeholder-specific views
- ✓ Top-to-bottom, end-to-end visibility across physical and logical domains
- ✓ Event Management automation, actionable intelligence
- ✓ Facilitates organizational transformation & ITSM adoption

Domain-Specific Views

Server Tribe | Net Tribe | App Tribe | Desktop Tribe

Virtualization and your ITIL® Road Map

- Virtualization accelerates the need for IT Service Management - **don't abandon your ITIL® initiatives!**

- 'Top-Down' service definitions that encompass business processes and key transactions are essential to success -- **Make sure your ITIL® Road Map has a Business Lane!**

- **Monitoring and Event Management are now front-burner issues**

- **CMDB**s oriented around workflow (ticketing) **must be augmented with a real-time capability**

- As the technologies are piloted, take steps to prepare processes and staff for virtualization -- **re-engage your ITSM program**!

- Continue to deal with organizational complexity; Event Management automation and ITSM are *Wicked Problems* --- **Get management support and be opportunistic!**

Thank You

- Free White Paper:

  - **Event Management's Moment of Truth -**
    The Business Case for Event Management Automation
  - www.MyServiceMonitor.com

- For more information:

  - John Worthington, Principal MyServiceMonitor, LLC

    - ✓ E-mail: JMW@MyServiceMonitor.com
    - ✓ Phone: (201) 826-1374
    - ✓ Web: www.MyServiceMonitor.com

Want to Learn More?

♦ Now available
  - ITIL® V3 Foundation / Bridge
  - ITIL® V3 Capability / Lifecycle
  - ITIL® V3 Service Manager Bridge
  - ITIL® V3 Books
  - ISO/IEC 20000 (ISO 20K) Foundation
  - Certified Process Design Engineer (CPDE)™
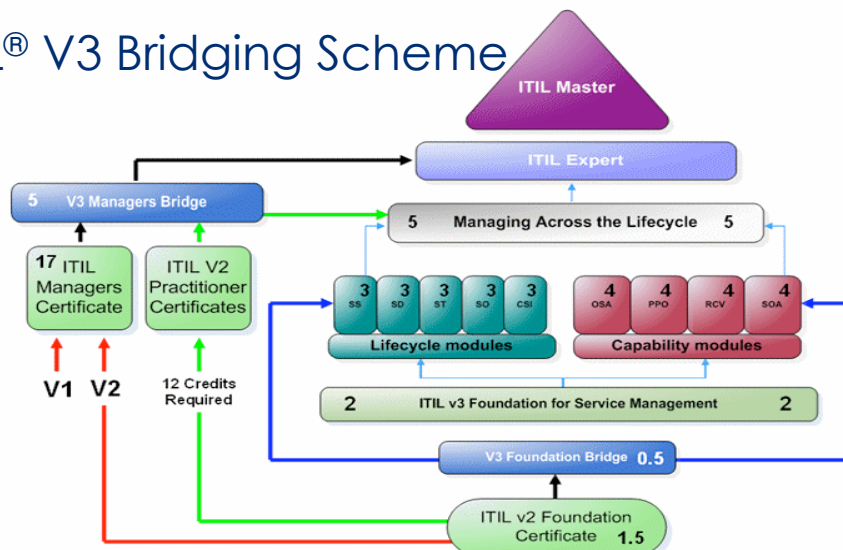 - MOF 4.0 Foundation

  ♦ Coming soon
    - Managing Across the Lifecycle
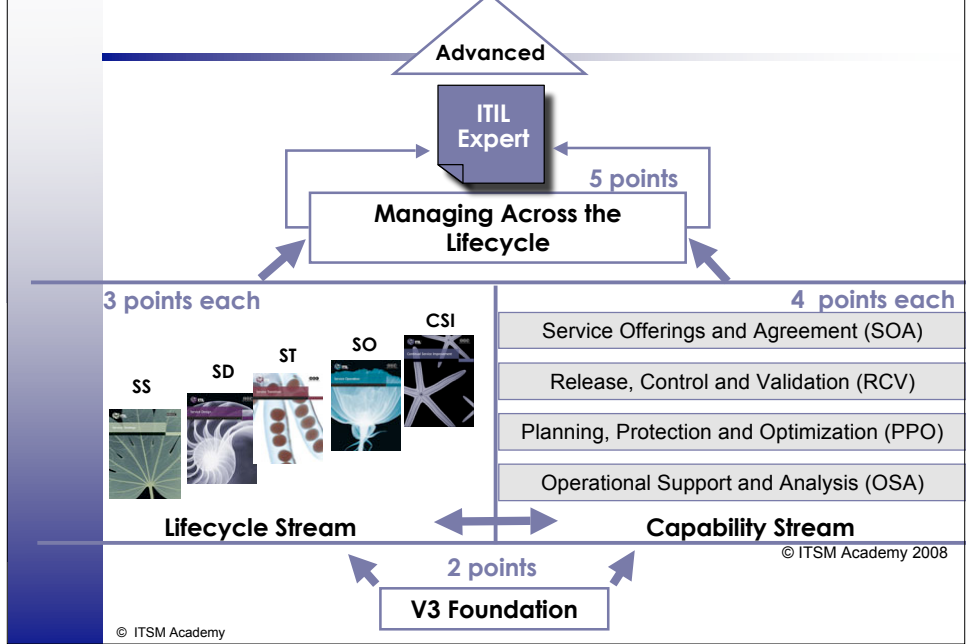   - ISO 20K Professional Level Modules

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ITIL® V3 Bridging Scheme

© OGC's Official Accreditor - The APM Group Limited 2008

V2 Practitioners with at least 12 credits must take the V3 Managers Bridge *and* the Managing Across the Lifecycle courses in order to achieve ITIL Expert certification.

ITIL® V3 Certification Scheme

Advanced

ITIL Expert

5 points

Managing Across the Lifecycle

3 points each

SS   SD   ST   SO   CSI

4 points each

| Service Offerings and Agreement (SOA) |
| Release, Control and Validation (RCV) |
| Planning, Protection and Optimization (PPO) |
| Operational Support and Analysis (OSA) |

Lifecycle Stream　　　　**Capability Stream**

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2 points

V3 Foundation

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