2017 中国互联网安全大会
China Internet Security Conference

云上的安全自动化

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合作伙伴解决方案架构师

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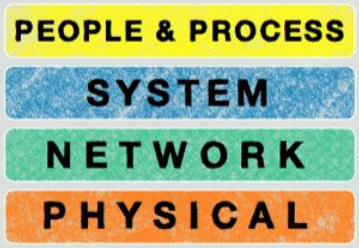
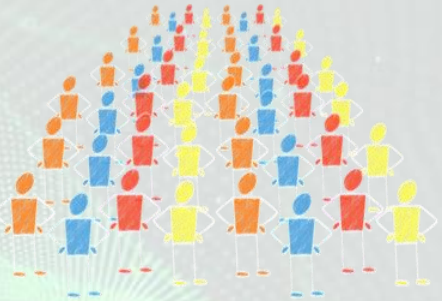
AWS云安全理念与技术合规

安全是第“零”项工作：Security is Job Zero



成熟的安全模型

被众多客户专家
验证和增强



所有客户受益

物理安全

网络安全

平台安全

人和过程

安全与合规是一种责任共担

客户

客户数据、内容

平台、应用、认证和授权管理，访问控制

操作系统，网络，防火墙配置

客户端数据加密 | 服务器端数据加密 | 网络流量保护

AWS 基础服务

计算 | 存储 | 数据库 | 网络

AWS 全球基础架构

可用区

区域

边缘节点

- ✓ AWS 最佳实践
- ✓ 业界标准
- ✓ AWS标准化架构
- ✓ 内部规章
- ✓ 服务文档
- ✓ AWS 工作手册
- ✓ AWS 技术资源

AWS众多技术确保云安全

网络

VPC

防火墙

加密

密码管理服务

Cloud HSM

加密

认证

IAM

SAML 联合

联合目录

合规

服务目录

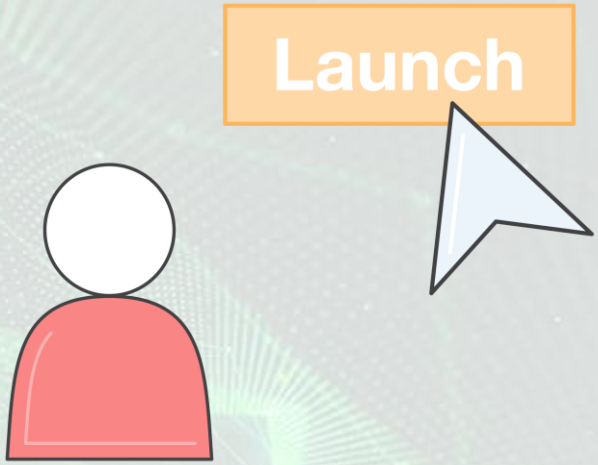
Cloud Trail

Config

为什么需要安全自动化

为什么需要自动化？

- 减少人为错误的风险

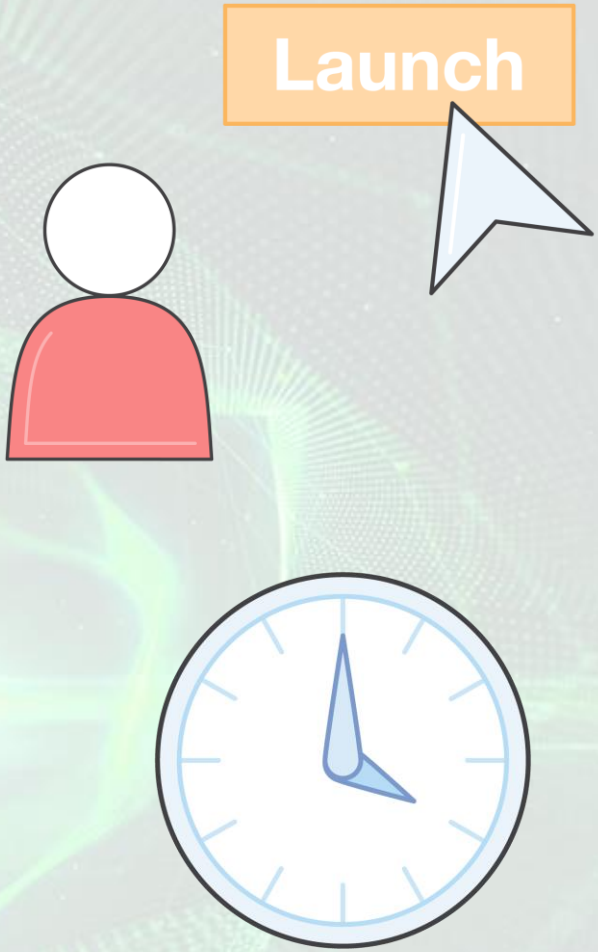


为什么需要自动化？

- 减少人为错误的风险
  - 自动化更有效

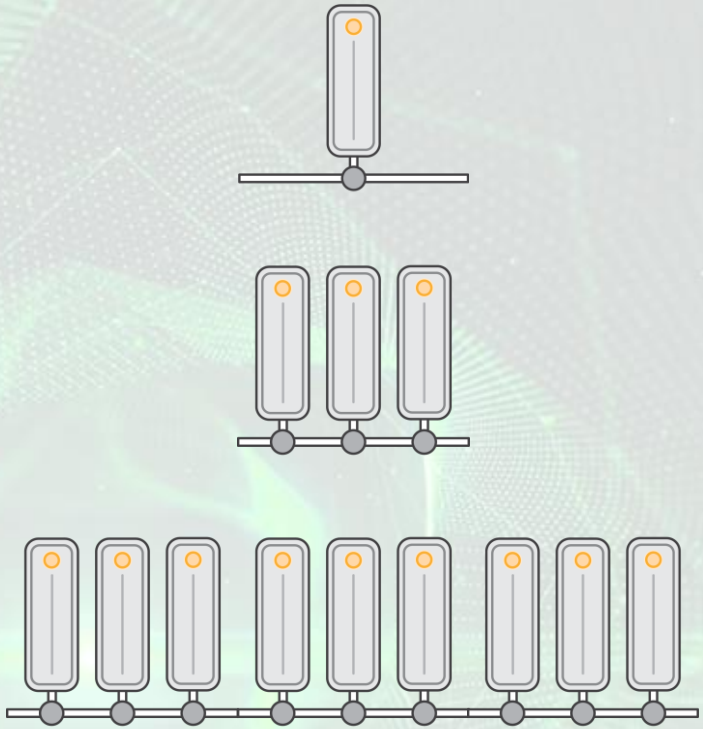
为什么需要自动化？

- 减少人为错误的风险
  - 自动化更有效
  - 自动化更可靠



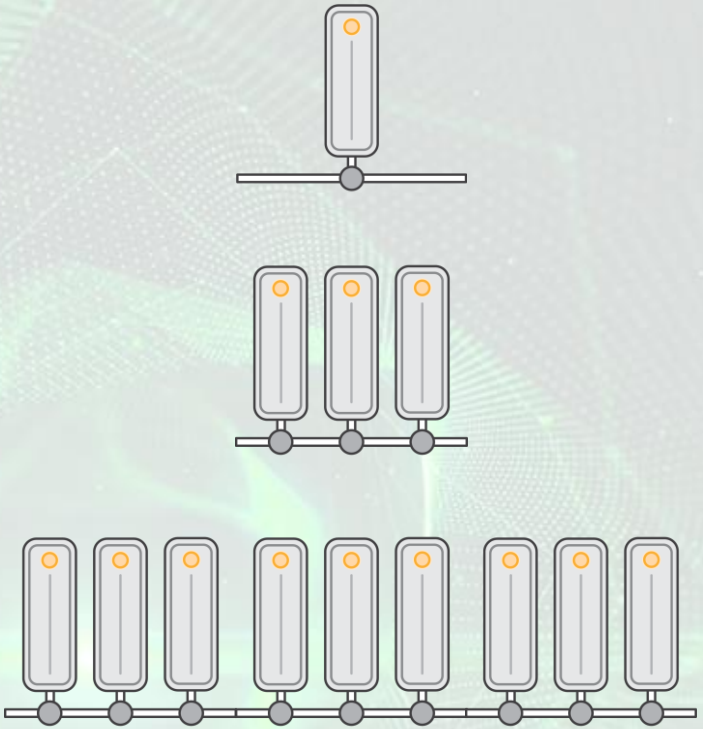
为什么需要自动化？

- 减少人为错误的风险
  - 自动化更有效
  - 自动化更可靠
  - 自动化更可扩展



为什么需要自动化？

- 减少人为错误的风险
  - 自动化更有效
  - 自动化更可靠
  - 自动化更可扩展
- 无需担心，依然需要人



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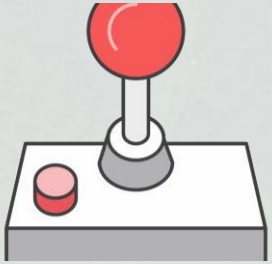
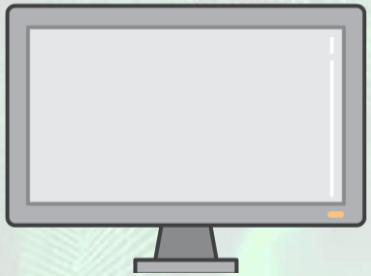
如何实现安全自动化

三个阶段

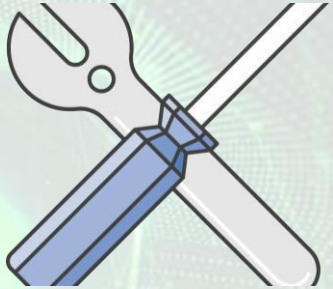
控制



监控



修复



阶段1 – 控制

- 防止可能带来问题的操作
  - AWS CloudFormation
  - Service Catalog
  - AWS IAM 策略
  - 禁止root密码
  - 检查GitHub是否泄漏访问密码

阶段2 – 监控

- 获取并监测所有元数据
  - AWS CloudTrail
  - AWS Config
  - Amazon CloudWatch Logs
  - VPC Flow Logs

阶段3 – 修复

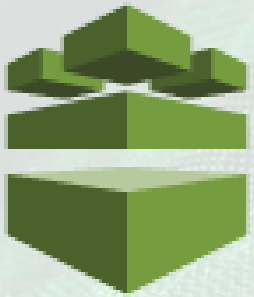
- 修复方式
  - 定位问题
  - 间接方式： tickets 或者 离线改正
  - 直接方式： 采取修正行动

自动化！

AWS帮助自动修复的服务

AWS Lambda

验证确定用户、组、角色、规则、行为是否合规。



AWS Config Rules

利用规则来验证、记录配置变更

Amazon SNS

发现问题时通知

示例

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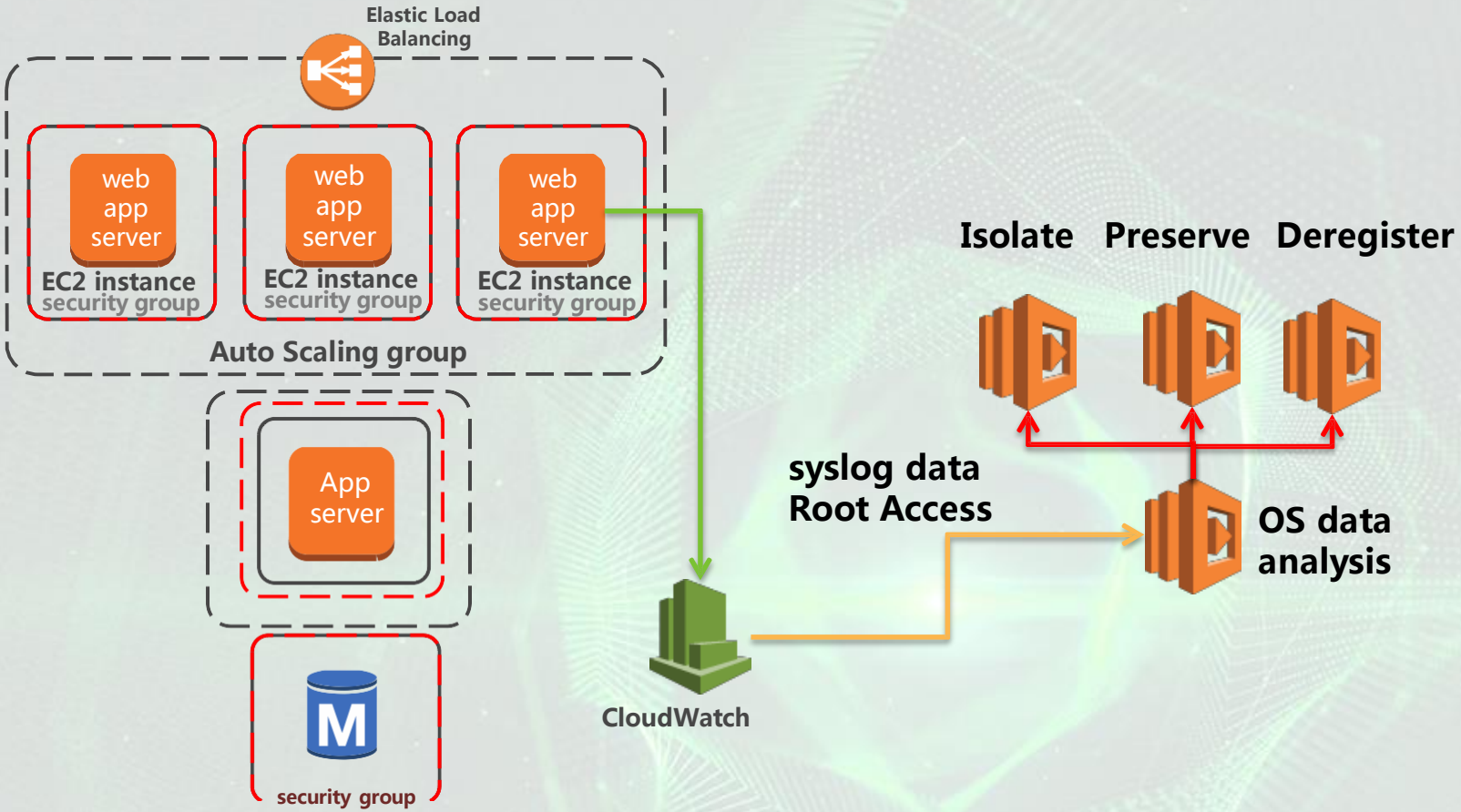
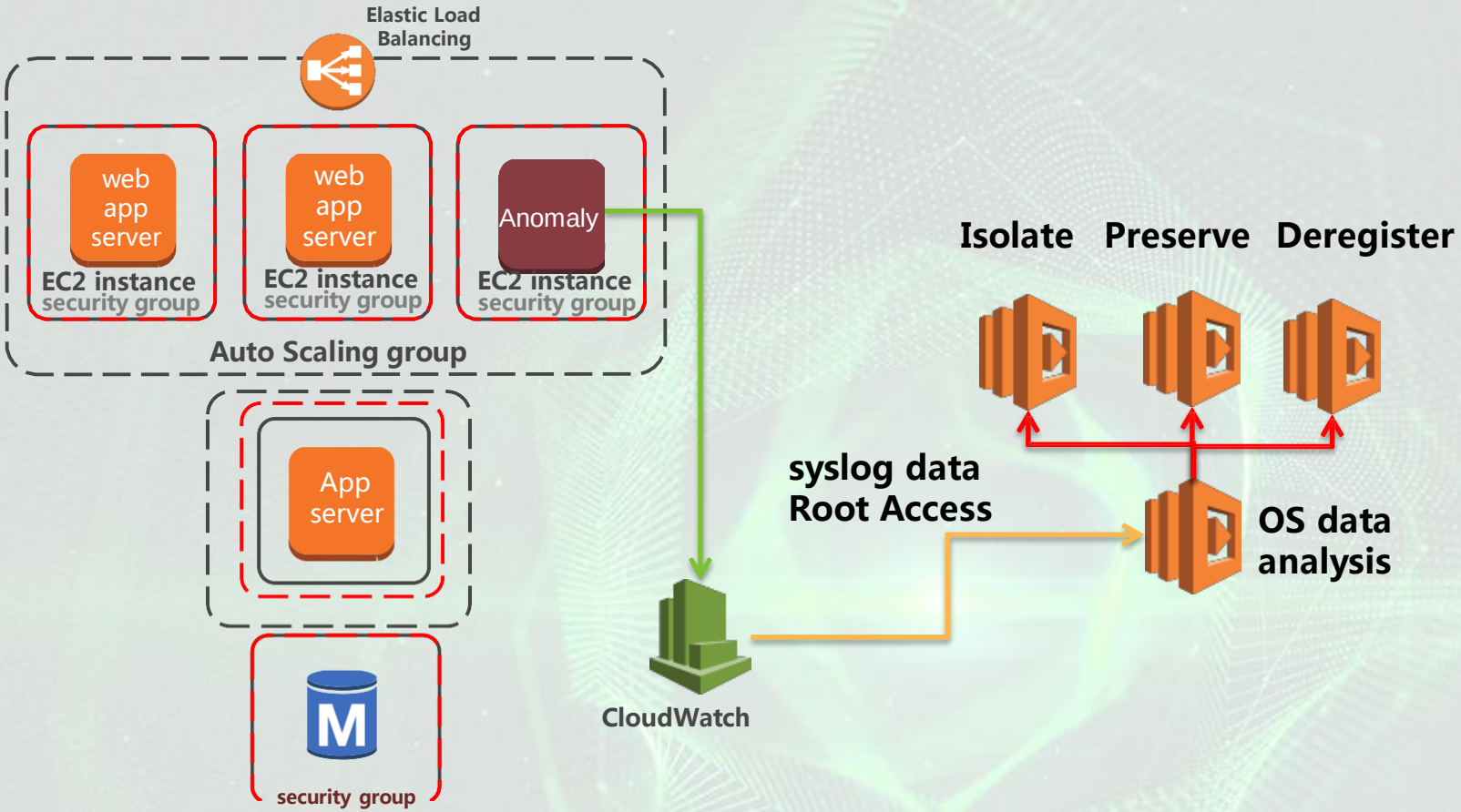

Elastic Load Balancing
web app server
EC2 instance security group
web app server
EC2 instance security group
web app server
EC2 instance security group
Auto Scaling group
App server
security group
CloudWatch
Isolate
Preserve
Deregister
syslog data
Root Access
OS data analysis

示例 – Cont 1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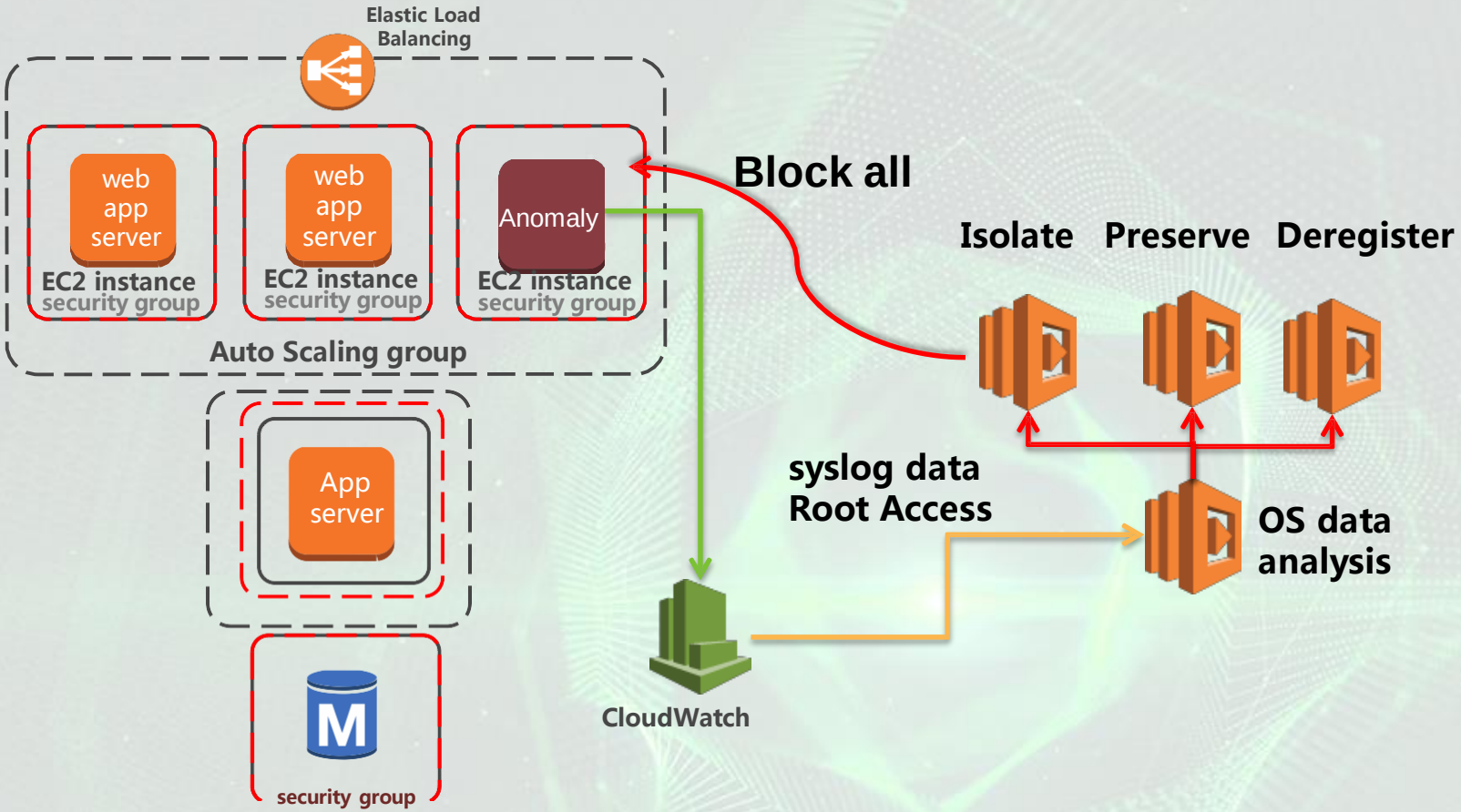
示例 – Cont 2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Block all
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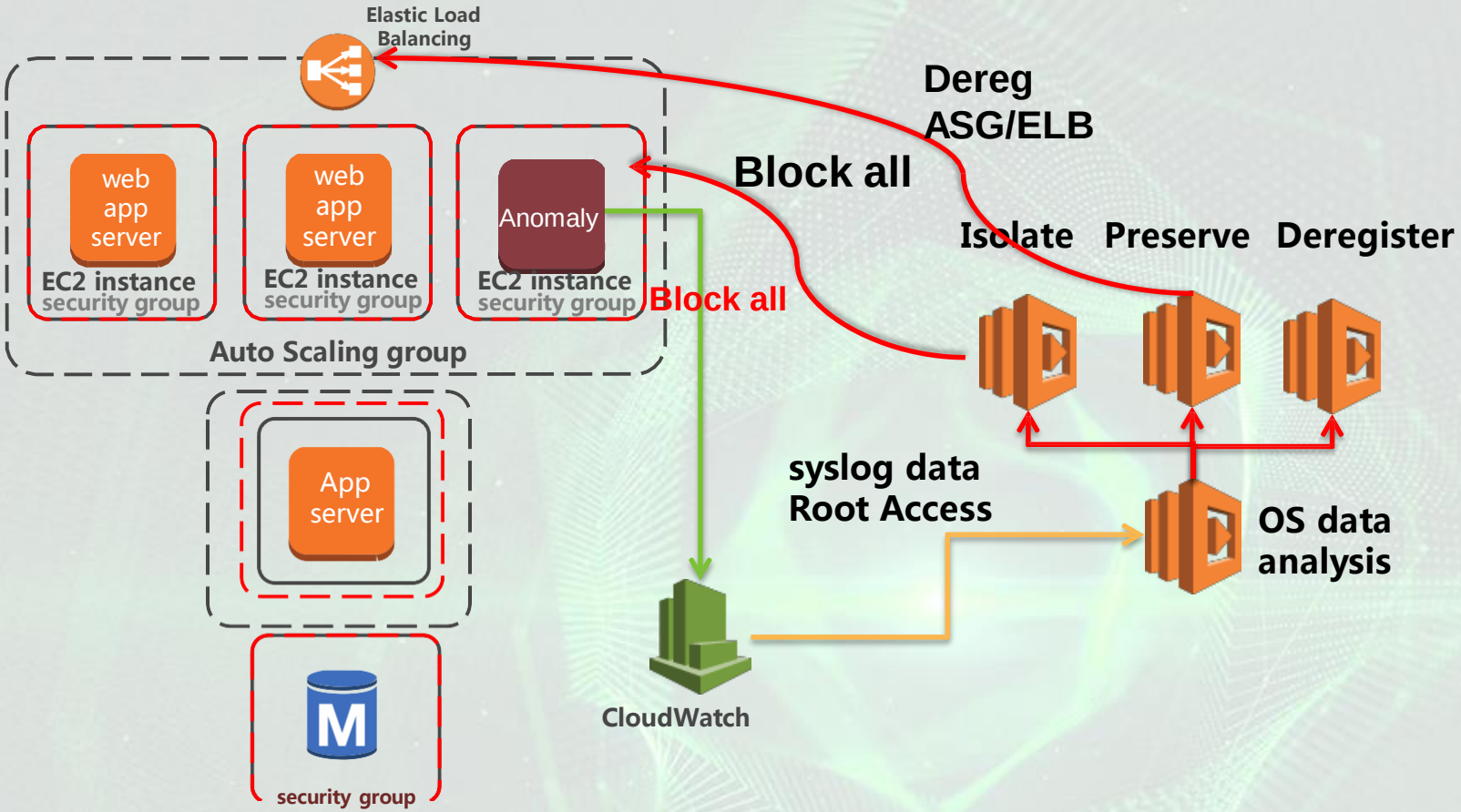
CloudWatch

示例 – Cont 3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Deregister
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Root Access
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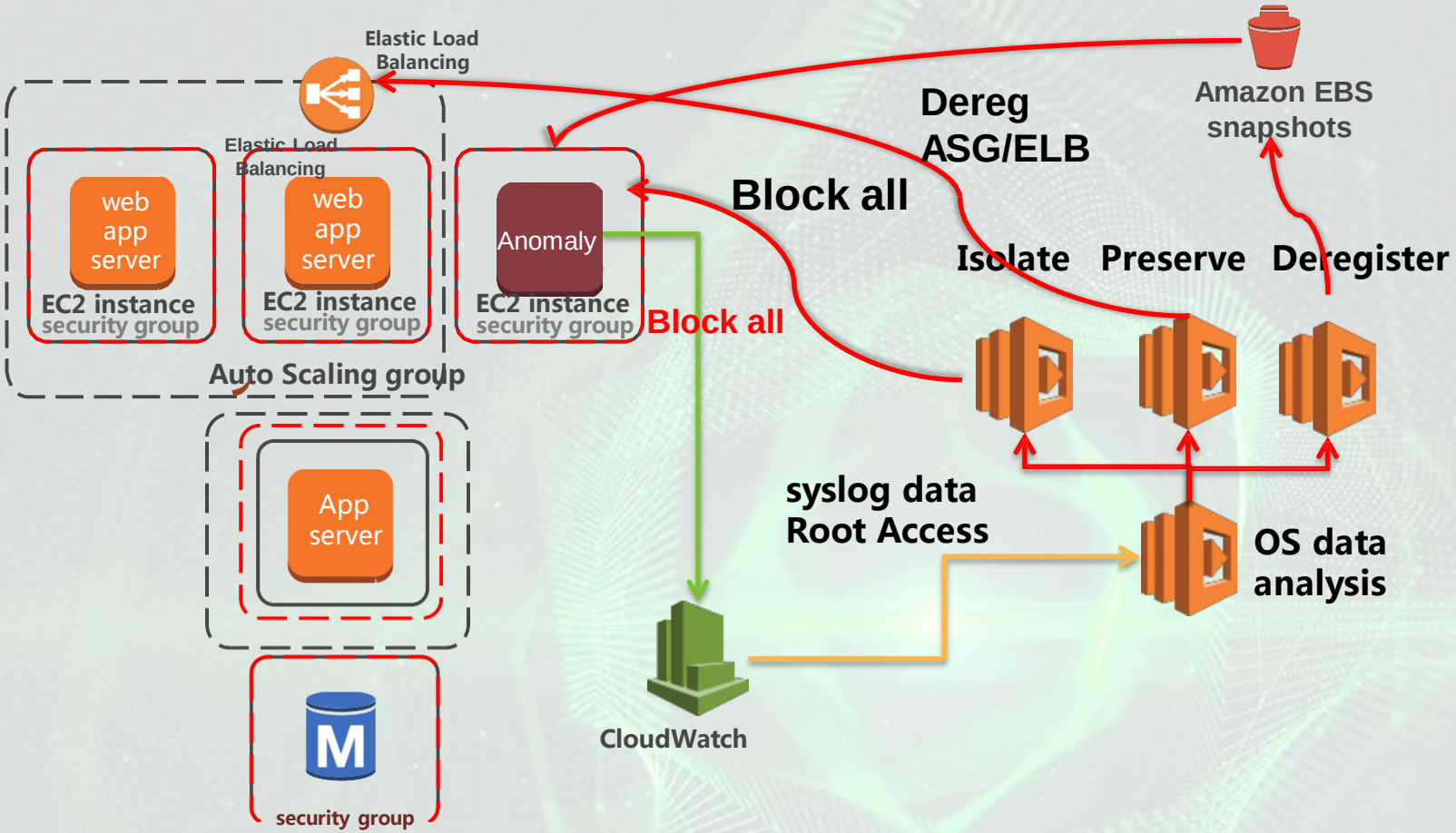
示例 – Cont 4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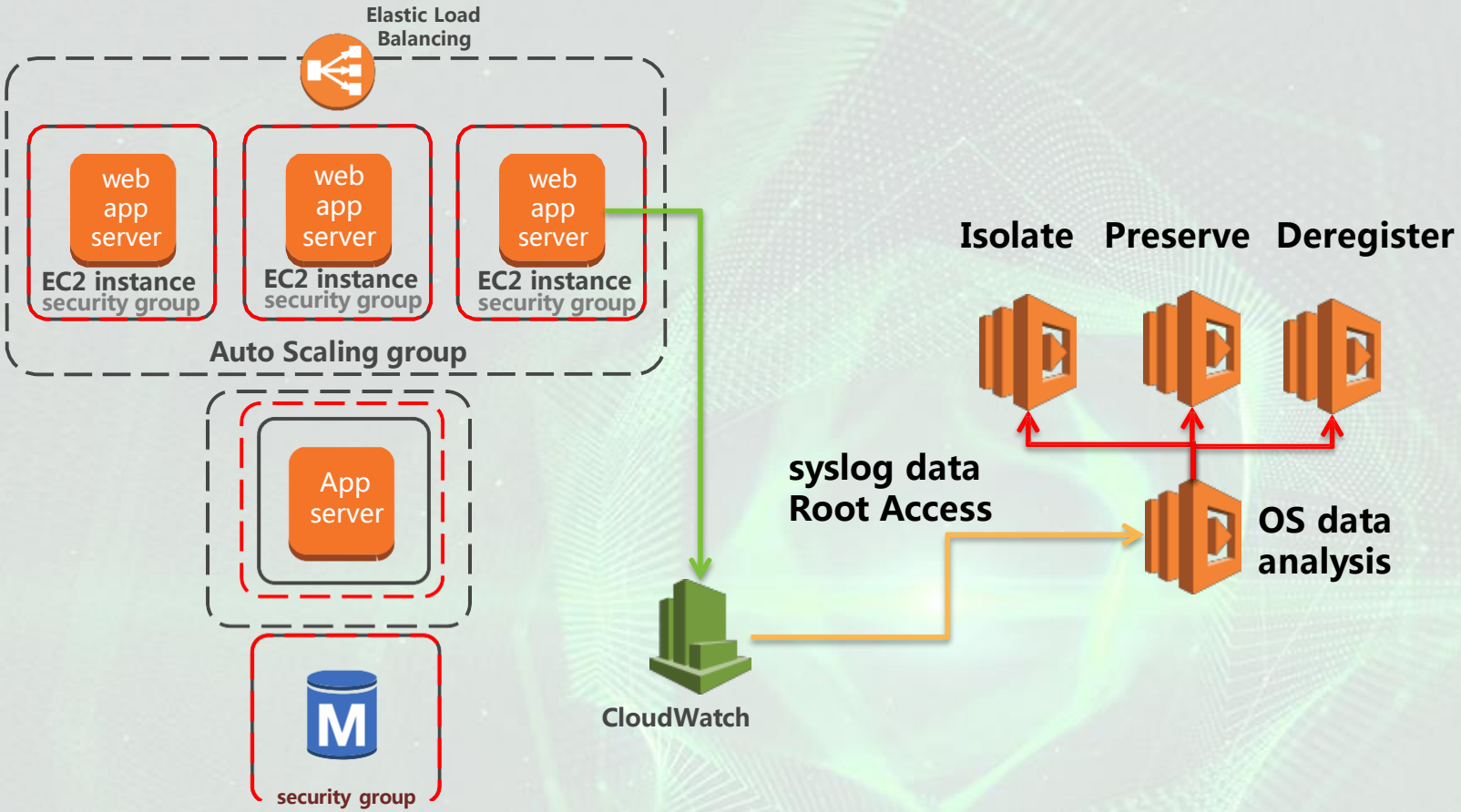
示例 – Cont 5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CloudCheckr

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谢　谢


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万物皆变 人是安全的尺度
Of All Things Human Is The Measure