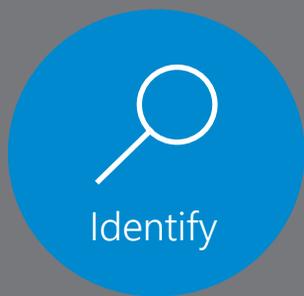




# Mapping Microsoft Cyber Offerings to NIST Cybersecurity Framework (CSF) Subcategories



The NIST CSF is designed with the intent that individual businesses and other organizations use an assessment of the business risks they face to guide their use of the framework in a cost-effective way.

The Framework is typically customized based on organizations' unique risk posture (e.g., variance in threats, vulnerabilities, and risk tolerances, and how they implement the practices in the Framework). Organizations can determine activities that are important to critical service delivery and can prioritize investments to maximize the impact of each dollar spent. Ultimately, the Framework is aimed at reducing and better managing cybersecurity risk.

The Framework complements an organization's risk management process and cybersecurity program. The organization can use its current processes and leverage the Framework to identify opportunities to strengthen and communicate its management of cybersecurity risk while aligning with industry practices. Alternatively, an organization without an existing cybersecurity program can use the Framework as a reference to establish one. Just as the Framework is not industry-specific, the common taxonomy of standards, guidelines, and practices that it provides also is not country-specific. Organizations outside the United States may also use the Framework to strengthen their own cybersecurity efforts, and the Framework can contribute to developing a common language for international cooperation on critical infrastructure cybersecurity.

In the table below, we have included four of the five Core Functions from the NIST CSF: Identify, Protect, Detect and Respond, because Microsoft Cyber Offerings can help with 61 of the 98 subcategories under those four high level functions. The resources (hyperlinks) listed reflect product information and how-to documentation. Where we have left subcategories blank, the activity should be covered by the implementing organization utilizing internal resources or third parties. For Microsoft partners, that white space is the opportunity to step in and provide much needed services.



Identify



Protect



Detect



Respond

## ID.AM: Asset Management

The data, personnel, devices, systems, and facilities that enable the organization to achieve business purposes are identified and managed consistent with their relative importance to business objectives and the organization’s risk strategy.

### ID.AM-1

Physical devices and systems within the organization are inventoried

- [System Center Configuration Manager Inventory – for fully managed devices](#)
- [Active Directory – Domain Joined Devices](#)
- [Azure AD Registered Devices](#)
- [IoT Hub – Device Identity Registry](#)
- [Microsoft Intune Device Inventory – for lightly managed devices](#)
- [Windows Analytics](#)

### ID.AM-2

Software platforms and applications within the organization are inventoried

- [Software Inventory with System Center Configuration Manager](#)
- [Microsoft Intune Device Inventory – for lightly managed devices](#)
- [Azure Subscription Inventory and Analysis – MSIT Showcase](#)
- [Windows Server 2016 – Software Inventory Logging](#)
- [Windows Server 2016 – Software Restriction Policies](#)
- [Shadow IT/SaaS App Discovery with Cloud App Security](#)

### ID.AM-3

Organizational communication and data flows are mapped

- [Shadow IT/SaaS App Discovery with Cloud App Security](#)
- [Operations Management Suite \(OMS\) Service Maps \(Systems Interconnections\)](#)
- [Azure Network Watcher](#)
- [Azure Network Security Groups – ACLs](#)
- [Azure IoT Hub IP Filtering](#)
- [Enhanced Security Administrative Environment \(ESAE\)](#)

### ID.AM-4

External information systems are catalogued

- [Azure AD Integrated Apps](#)
- [Shadow IT/SaaS App Discovery with Cloud App Security](#)

### ID.AM-5

Resources (e.g., hardware, devices, data, and software) are prioritized based on their classification, criticality, and business value

[Azure Information Protection – Data Classification](#)  
[Privileged Access Reference Material](#)  
[Azure AD Privileged Identity Management](#)

### ID.AM-6

Cybersecurity roles and responsibilities for the entire workforce and third-party stakeholders (e.g., suppliers, customers, partners) are established

[Privileged Access Reference Material](#)  
[Azure AD Privileged Identity Management](#)  
[Just Enough Administration](#)  
[Just in Time Administration – Privileged Access Management](#)

## ID.BE: Business Environment

The organization's mission, objectives, stakeholders, and activities are understood and prioritized; this information is used to inform cybersecurity roles, responsibilities, and risk management decisions.

### ID.BE-1

The organization's role in the supply chain is identified and communicated

[Privileged Access Workstation](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)

### ID.BE-2

The organization's place in critical infrastructure and its industry sector is identified and communicated\*

### ID.BE-3

Priorities for organizational mission, objectives, and activities are established and communicated\*

### ID.BE-4

Dependencies and critical functions for delivery of critical services are established\*

### ID.BE-5

Resilience requirements to support delivery of critical services are established

[Designing Resilient Applications for Microsoft Azure](#)

## ID.GV: Governance

The policies, procedures, and processes to manage and monitor the organization's regulatory, legal, risk, environmental, and operational requirements are understood and inform the management of cybersecurity risk.

### ID.GV-1

Organizational information security policy is established\*

### ID.GV-2

Information security roles & responsibilities are coordinated and aligned with internal roles and external partners

[Azure – Shared Responsibility](#)

[Microsoft Incident Response and Shared Responsibility](#)

### ID.GV-3

Legal and regulatory requirements regarding cybersecurity, including privacy and civil liberties obligations, are understood and managed

[Microsoft Compliance Offerings](#)

[Cloud App Security – third-party risk evaluation and known certifications](#)

[Microsoft and General Data Protection Regulation \(GDPR\)](#)

[Privacy with Microsoft](#)

### ID.GV-4

Governance and risk management processes address cybersecurity risks

[Microsoft Cloud Services Risk Assessment](#)

## ID.RA: Risk Assessment

The organization understands the cybersecurity risk to organizational operations (including mission, functions, image, or reputation), organizational assets, and individuals.

### ID.RA-1

Asset vulnerabilities are identified and documented

[Qualys Virtual Scanner Appliance in Azure Marketplace](#)

[Vulnerability Assessment in Azure Security Center](#)

[Office 365 Secure Score](#)

[Active Directory Risk Assessment](#)

[Microsoft Cloud Services Risk Assessment](#)

[Privileged Access Workstation](#)

[Design and Implementation for Active Directory \(DIAD\)](#)

### ID.RA-2

Threat and vulnerability information is received from information sharing forums and sources

[Microsoft Security Intelligence](#)

[Microsoft Operations Management Suite \(OMS\) Security and Compliance](#)

### ID.RA-3

Threats, both internal and external, are identified and documented

[Microsoft Threat Modeling Tool](#)  
[Microsoft Threat Management](#)  
[Microsoft Operations Management Suite \(OMS\) Security and Compliance](#)

### ID.RA-4

Potential business impacts and likelihoods are identified\*

### ID.RA-5

Threats, vulnerabilities, likelihoods, and impacts are used to determine risk

[Cybersecurity Operations Service](#)

### ID.RA-6

Risk responses are identified and prioritized

[Cybersecurity Operations Service](#)

## ID.RM: Risk Management Strategy

The organization's priorities, constraints, risk tolerances, and assumptions are established and used to support operational risk decisions.

### ID.RM-1

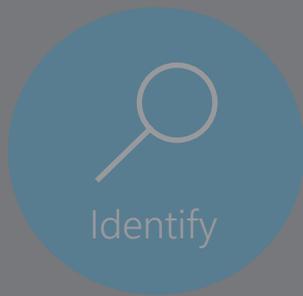
Risk management processes are established, managed, and agreed to by organizational stakeholders\*

### ID.RM-2

Organizational risk tolerance is determined and clearly expressed\*

### ID.RM-3

The organization's determination of risk tolerance is informed by its role in critical infrastructure and sector specific risk analysis\*



## PR.AC: Access Control

Access to assets and associated facilities is limited to authorized users, processes, or devices, and to authorized activities and transactions.

### PR.AC-1

Identities and credentials are managed for authorized devices and users

- [Best Practices for Securing Active Directory](#)
- [Microsoft Identity Manager: Connect your Directories](#)
- [Connect Active Directory with Azure Active Directory](#)
- [Azure Active Directory – Group Management](#)
- [Automated User Provisioning and Deprovisioning to SaaS Apps](#)
- [Azure AD Join \(Devices\)](#)
- [Enroll devices for management in Microsoft Intune](#)
- [Control Access to Azure IoT Hub](#)
- [Azure IoT Hub – Device Identity Registry](#)
- [Azure AD Privileged Identity Management](#)
- [Privileged Access Management for Active Directory Domain Services](#)
- [Privileged Access Workstation](#)
- [Design and Implementation for Active Directory \(DIAD\)](#)
- [Azure Active Directory B2C](#)
- [Fast Start – Azure for Identity](#)
- [Dynamic Identity Framework \(DIF\)](#)
- [Enhanced Security Administrative Environment \(ESAE\)](#)
- [Microsoft Identity Manager Implementation Services](#)
- [Privileged Access Management](#)
- [Azure Active Directory Implementation Services \(AADIS\)](#)
- [Enterprise Modernization for Active Directory](#)

### PR.AC-2

Physical access to assets is managed and protected

- [Protecting Data in Azure \(Page 23, Physical Security\)](#)
- [Privileged Access Workstation](#)
- [Design and Implementation for Active Directory \(DIAD\)](#)

### PR.AC-3

Remote access is managed

[Conditional Access in Azure AD](#)  
[Remote Desktop Services in Server 2016](#)  
[Server 2016: Web Application Proxy](#)  
[Secure Remote Access to on-premises applications: Azure AD App Proxy](#)  
[Azure Security – Remote Management](#)  
[Cloud App Security – Cloud App Governance and Control](#)  
[Device Compliance Policies for Conditional Access](#)  
[Privileged Access Workstation](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)

### PR.AC-4

Access permissions are managed, incorporating the principles of least privilege and separation of duties

[Just Enough Administration \(PowerShell - White Paper and Resources\)](#)  
[Just Enough Administration: Step by Step](#)  
[Windows Server: Dynamic Access Control](#)  
[Microsoft Azure: Role Based Access Control](#)  
[Azure AD Privileged Identity Management](#)  
[Privileged Access Management for Active Directory Domain Services](#)  
[Privileged Access Workstation](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)

### PR.AC-5

Network integrity is protected, incorporating network segregation where appropriate

[Microsoft Azure: Secure network with virtual appliances](#)  
[Microsoft Cloud Services and Network Security](#)  
[Azure Network Security Best Practices](#)  
[Azure Network Security Whitepaper](#)  
[Privileged Access Workstation](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)

## PR.AT: Awareness and Training

The organization's personnel and partners are provided cybersecurity awareness education and are adequately trained to perform their information security-related duties and responsibilities consistent with related policies, procedures, and agreements.

### PR.AT-1

All users are informed and trained

[Enhanced Security Administrative Environment \(ESAE\)](#)

### PR.AT-2

Privileged users understand roles & responsibilities

[Enhanced Security Administrative Environment \(ESAE\)](#)

### PR.AT-3

Third-party stakeholders (e.g., suppliers, customers, partners) understand roles & responsibilities

[Enhanced Security Administrative Environment \(ESAE\)](#)

#### PR.AT-4

Senior executives understand roles & responsibilities

[Enhanced Security Administrative Environment \(ESAE\)](#)

#### PR.AT-5

Physical and information security personnel understand roles & responsibilities

[Enhanced Security Administrative Environment \(ESAE\)](#)

## PR.DS: Data Security

Information and records (data) are managed consistent with the organization's risk strategy to protect the confidentiality, integrity, and availability of information.

#### PR.DS-1

Data-at-rest is protected

[Windows Server 2016: Full disk Encryption with BitLocker –How to install](#)

[Windows 10 Full disk encryption - BitLocker](#)

[Shielded VMs in Windows Server 2016](#)

[Azure disk encryption for IaaS VMs](#)

[Azure Storage Service Encryption for data at rest](#)

[Azure Storage Security Guide](#)

[SQL Server Encryption](#)

[Azure Information Protection - File Classification and Protection](#)

[Windows Information Protection](#)

[Encryption in Office 365](#)

[Azure Backup Data Encryption](#)

[Microsoft Trust Center – Encryption](#)

[Secure Mobile Devices with Microsoft Intune](#)

[Cloud App Security – Govern Connected SaaS apps](#)

[Azure SQL Transparent Data Encryption](#)

[Privileged Access Workstation](#)

[Enhanced Security Administrative Environment \(ESAE\)](#)

[Design and Implementation for Active Directory \(DIAD\)](#)

[Azure Information Protection](#)

[Full Volume Encryption - Windows BitLocker Drive Encryption](#)

#### PR.DS-2

Data-in-transit is protected

[Azure VPN Gateway](#)

[Azure ExpressRoute](#)

[Office 365 Message Encryption](#)

[Data Encryption SharePoint Online and OneDrive for Business](#)

[SMB Encryption](#)

[Remote Desktop Protocol Encryption](#)

[Encrypting Connections to SQL Server](#)

[Microsoft Trust Center – Encryption](#)

[Internet Protocol Security \(IPSec\)](#)

[Enhanced Security Administrative Environment \(ESAE\)](#)

### PR.DS-3

Assets are formally managed throughout removal, transfers, and disposition

[Protecting Data in Azure \(Page 18, Media Destruction\)](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)

### PR.DS-4

Adequate capacity to ensure availability is maintained

[Azure Subscription Service Limits](#)  
[Server 2016 Locks and Limits](#)  
[Exchange Online Limits](#)  
[SQL Server 2016 Limits](#)  
[Operations Management Suite \(OMS\): Hyper-V Capacity Management Solution](#)  
[Systems Center Operations Manager: Monitoring](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)

### PR.DS-5

Protections against data leaks are implemented

[Office 365 Data Loss Prevention](#)  
[Windows Information Protection](#)  
[Microsoft Cloud App Security and Data Loss Prevention](#)  
[Microsoft Intune Mobile Application Management and Data Loss Prevention](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)

### PR.DS-6

Integrity checking mechanisms are used to verify software, firmware, and information integrity

[Windows Device Guard](#)  
[Introduction to Code Signing](#)  
[Signing PowerShell Scripts, Part 1](#)  
[Signing PowerShell Scripts, Part 2](#)  
[Deploying code integrity policies](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)

### PR.DS-7

The development and testing environment(s) are separate from the production environment

[Azure DevTest Labs](#)  
[Use DevOps environments effectively for your web apps](#)  
[MSDN/Visual Studio subscription \(Dev/Test tools, licenses, and cloud services\)](#)

## PR.IP: Information Protection Processes and Procedures

Security policies (that address purpose, scope, roles, responsibilities, management commitment, and coordination among organizational entities), processes, and procedures are maintained and used to manage protection of information systems and assets.

### PR.IP-1

A baseline configuration of information technology/ industrial control systems is created and maintained

[Windows Security Baseline](#)  
[Azure Automation Desired State Configuration](#)  
[PowerShell Desired State Configuration](#)  
[Compliance Settings in System Center Configuration Manager](#)  
[Change Tracking with OMS - Log Analytics](#)  
[Azure Security Center - Common Configuration Identifiers and Baseline Rules](#)

[Privileged Access Workstation](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)

#### PR.IP-2

A System Development Life Cycle to manage systems is implemented

[Microsoft Security Development Lifecycle](#)  
[Security Development Lifecycle Tools](#)

#### PR.IP-3

Configuration change control processes are in place

[Change Management for Enterprise: Office 365](#)  
[Incident and Change Management with System Center Service Manager](#)  
[How Microsoft IT approaches Organization Change Management](#)  
[Skype for Business Change Management and Adoption](#)  
[Managing Changes and Activities with System Center](#)

#### PR.IP-4

Backups of information are conducted, maintained, and tested periodically

[System Center Data Protection Manager](#)  
[Azure Backup](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)

#### PR.IP-5

Policy and regulations regarding the physical operating environment for organizational assets are met

[Azure Security, Privacy, and Compliance Whitepaper](#)  
[Security and Compliance in Office 365](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)

#### PR.IP-6

Data is destroyed according to policy

[Retention Policies in Office 365 Compliance Center](#)  
[Protecting Data in Microsoft Azure \(See Media Destruction and Data Deletion\)](#)

#### PR.IP-7

Protection processes are continuously improved

[Office 365 Secure Score](#)  
[Microsoft Enterprise Cloud Red Teaming \(PDF download\)](#)  
[Penetration testing of your Azure hosted Applications](#)

#### PR.IP-8

Effectiveness of protection technologies is shared with appropriate parties\*

#### PR.IP-9

Response plans (Incident Response and Business Continuity) and recovery plans (Incident Recovery and Disaster Recovery) are in place and managed

[Microsoft Azure Security Response in the Cloud](#)  
[Office 365 Security Incident Management](#)  
[Responding to Security IT Incidents](#)  
[Azure Site Recovery](#)  
[Cybersecurity Operations Service](#)

### PR.IP-10

Response and recovery plans are tested

[Test Failover to Azure in Site Recovery](#)

### PR.IP-11

Cybersecurity is included in human resources practices (e.g., deprovisioning, personnel screening)\*

### PR.IP-12

A vulnerability management plan is developed and implemented

[Vulnerability Assessment in Azure Security Center](#)

[Vulnerabilities detected by Azure AD Identity Protection](#)

[System Center Configuration Manager Vulnerability Assessment Pack](#)

[Enhanced Security Administrative Environment \(ESAE\)](#)

## PR.MA: Maintenance

Maintenance and repairs of industrial control and information system components is performed consistent with policies and procedures.

### PR.MA-1

Maintenance and repair of organizational assets is performed and logged in a timely manner, with approved and controlled tools

[Windows Automatic Maintenance](#)

[Azure Security and Audit Log Management](#)

### PR.MA-2

Remote maintenance of organizational assets is approved, logged, and performed in a manner that prevents unauthorized access

[Azure AD B2B](#)

[Azure Security and Audit Log Management](#)

[Privileged Access Workstation](#)

[Enhanced Security Administrative Environment \(ESAE\)](#)

[Design and Implementation for Active Directory \(DIAD\)](#)

## PR.PT: Protective Technology

Technical security solutions are managed to ensure the security and resilience of systems and assets, consistent with related policies, procedures, and agreements.

### PR.PT-1

Audit/log records are determined, documented, implemented, and reviewed in accordance with policy

[Azure Security and Audit Log Management](#)

[Microsoft Azure log integration/Security Information/SIEM systems](#)

[Office 365 Audit logs](#)

[Azure log analytics](#)

[Active Directory Auditing](#)

[Windows Server 2016 Security Auditing](#)

[Azure Information Protection Logging](#)

[Cloud App Security - Governance & Audit for Microsoft & 3rd party SaaS apps](#)

[Cloud App Security SIEM integration](#)  
[SQL Server Audit](#)  
[Microsoft Dynamics Auditing Overview](#)  
[Privileged Access Workstation](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)

#### PR.PT-2

Removable media is protected and its use restricted according to policy

[BitLocker Policy reference – Windows 10 \(See the Removable Drive section\)](#)  
[Control Access to Removable Media \(Group Policy\)](#)  
[Privileged Access Workstation](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)  
[Full Volume Encryption - Windows BitLocker Drive Encryption](#)

#### PR.PT-3

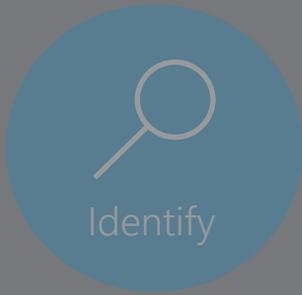
Access to systems and assets is controlled, incorporating the principle of least functionality

[Application Whitelisting w/ Win10 Device Guard, AppLocker, & Configuration Mgr](#)  
[AppLocker: Application Whitelisting](#)  
[Server 2016 Hardening Guideline](#)  
[Privileged Access Workstation](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)

#### PR.PT-4

Communications and control networks are protected

[Creating and using network isolated environments \(SCVMM, Hyper-V\)](#)  
[Introduction to Server and Domain Isolation \(reference\)](#)  
[Azure Network Security Whitepaper](#)  
[Privileged Access Workstation](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)



## DE.AE: Anomalies and Events

Anomalous activity is detected in a timely manner and the potential impact of events is understood.

### DE.AE-1

A baseline of network operations and expected data flows for users and systems is established and managed

[Advanced Threat Analytics \(See question regarding baseline\)](#)  
[Advanced Threat Analytics Implementation Services \(ATAIS\)](#)  
[Microsoft Cloud App Security - Anomaly Detection - SaaS Apps](#)  
[Azure Security Center - see Anomaly Detection](#)  
[Office 365 - Anomaly Detection with ASM](#)  
[Monitoring networks with System Center Operations Manager](#)  
[Privileged Access Workstation](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)

### DE.AE-2

Detected events are analyzed to understand attack targets and methods

[OMS - Log Analytics](#)  
[Advanced Threat Analytics - working with suspicious activities](#)  
[Advanced Threat Analytics Implementation Services \(ATAIS\)](#)  
[Privileged Access Workstation](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)

### DE.AE-3

Event data are aggregated and correlated from multiple sources and sensors

[OMS - Log Analytics](#)  
[Advanced Threat Analytics - SIEM integration](#)  
[Advanced Threat Analytics Implementation Services \(ATAIS\)](#)  
[Azure logs - SIEM integration](#)  
[SIEM integration - Cloud App Security](#)  
[Privileged Access Workstation](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)

#### DE.AE-4

Impact of events is determined

[Azure AD Risk Events](#)  
[Privileged Access Workstation](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)  
[Cybersecurity Operations Service](#)

#### DE.AE-5

Incident alert thresholds are established

[Creating alert rules in Log Analytics](#)  
[Office 365 - creating security and audit alerts](#)  
[Azure AD Privileged Identity Management - Creating Alerts](#)  
[Azure AD Risk Events](#)  
[Azure Security Center - managing alerts](#)  
[Managing alerts in System Center Operations Manager](#)  
[Cloud App Security - Control cloud apps with policies \(fine tuning thresholds\)](#)  
[Advanced Threat Analytics - working with suspicious activities](#)  
[Advanced Threat Analytics Implementation Services \(ATAIS\)](#)  
[Privileged Access Workstation](#)  
[Design and Implementation for Active Directory \(DIAD\)](#)  
[Cybersecurity Operations Service](#)

## DE.CM: Security Continuous Monitoring

The information system and assets are monitored at discrete intervals to identify cybersecurity events and verify the effectiveness of protective measures.

#### DE.CM-1

The network is monitored to detect potential cybersecurity events

[OMS - Security and Audit Solution](#)  
[Index of Security related information from SCOM](#)  
[Advanced Threat Analytics - Events Detected](#)  
[Advanced Threat Analytics Implementation Services \(ATAIS\)](#)  
[Azure Network Security](#)

#### DE.CM-2

The physical environment monitored to detect potential cybersecurity events

[Azure Security and Compliance \(See Infrastructure Protection section\)](#)

#### DE.CM-3

Personnel activity is monitored to detect potential cybersecurity events

[Microsoft Cloud App Security - Anomaly Detection - SaaS Apps](#)  
[Azure Events - Audit Logs](#)  
[O365 - Audit Logging](#)  
[Windows Security Audit Events](#)

#### DE.CM-4

Malicious code is detected

[Office 365 Advanced Email Protection](#)  
[Windows Defender Advanced Threat Protection](#)

[Antimalware for Azure Services and VMs](#)  
[System Center - Endpoint Protection](#)  
[Microsoft Intune: Protecting Windows PCs against malware threats](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)

#### DE.CM-5

Unauthorized mobile code is detected

[Whitelisting/blacklisting apps for KNOX](#)  
[Blacklisting/whitelisting apps on iOS with Intune](#)  
[Compliant/noncompliant apps on Android with Intune](#)

#### DE.CM-6

External service provider activity is monitored to detect potential cybersecurity events

[Microsoft Incident Response in the Cloud \(see Customer Notification section\)](#)

#### DE.CM-7

Monitoring for unauthorized personnel, connections, devices, and software is performed

[Microsoft Azure AD: Conditional Access](#)  
[Advanced Threat Analytics: Threats Detected](#)  
[Advanced Threat Analytics Implementation Services \(ATAIS\)](#)  
[AppLocker Overview - Application Auditing/Restrictions](#)  
[Windows Security Audit Events](#)

#### DE.CM-8

Vulnerability scans are performed

[Qualys Virtual Scanner Appliance in Azure Marketplace](#)  
[Vulnerability Assessment in Azure Security Center](#)  
[System Center Configuration Manager Vulnerability Assessment Pack](#)  
[Enhanced Security Administrative Environment \(ESAE\)](#)

## DE.DP: Detection Processes

Detection processes and procedures are maintained and tested to ensure timely and adequate awareness of anomalous events.

#### DE.DP-1

Roles and responsibilities for detection are well defined to ensure accountability\*

#### DE.DP-2

Detection activities comply with all applicable requirements\*

#### DE.DP-3

Detection processes are tested

[Microsoft Cloud - Red Teaming \(Blog and link to whitepaper\)](#)

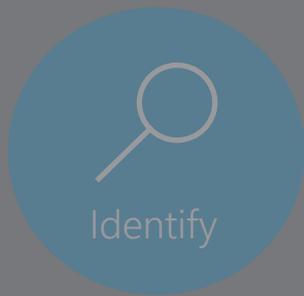
#### DE.DP-4

Event detection information is communicated to appropriate parties\*

#### DE.DP-5

Detection processes are continuously improved

[Azure AD Identity Protection \(See machine learning for continuous improvement\)](#)  
[Windows Defender Advanced Threat Protection - threat intel to improve detection](#)



## RS.RP: Response Planning

Response processes and procedures are executed and maintained, to ensure timely response to detected cybersecurity events.

### RS.RP-1

Response plan is executed during or after an event

[Microsoft Azure Security Response in the Cloud](#)

[Microsoft Incident Response & Shared Responsibility Incident Response Guide](#)

[Responding to Security IT Incidents](#)

[Azure AD role in Incident Response](#)

[Leverage Azure Security Center & Operations Mgmt Suite for Incident Response \(vid\)](#)  
[Security Incident Management in Office 365](#)

## RS.CO: Communications

Response activities are coordinated with internal and external stakeholders, as appropriate, to include external support from law enforcement agencies.

### RS.CO-1

Personnel know their roles and order of operations when a response is needed\*

### RS.CO-2

Events are reported consistent with established criteria\*

### RS.CO-3

Information is shared consistent with response plans\*

### RS.CO-4

Coordination with stakeholders occurs consistent with response plans\*

### RS.CO-5

Voluntary information sharing occurs with external stakeholders to achieve broader cybersecurity situational awareness

[Microsoft Active Protections Program](#)

## RS.AN: Analysis

Analysis is conducted to ensure adequate response and support recovery activities.

### RS.AN-1

Notifications from detection systems are investigated\*

### RS.AN-2

The impact of the incident is understood\*

### RS.AN-3

Forensics are performed

[A guide to Windows Forensics](#)

### RS.AN-4

Incidents are categorized consistent with response plans\*

[Windows Security and Forensics course](#)

## RS.MI: Mitigation

Activities are performed to prevent expansion of an event, mitigate its effects, and eradicate the incident.

### RS.MI-1

Incidents are contained

[Responding to Security IT Incidents](#)

[Windows Defender Advanced Threat Protection – response actions](#)

### RS.MI-2

Incidents are mitigated

[Responding to Security IT Incidents](#)

### RS.MI-3

Newly identified vulnerabilities are mitigated or documented as accepted risks\*

## RS.IM: Improvements

Organizational response activities are improved by incorporating lessons learned from current and previous detection/response activities.

### RS.IM-1

Response plans incorporate lessons learned\*

### RS.IM-2

Response strategies updated\*

*This document is a commentary on the NIST Cybersecurity Framework, as Microsoft interprets it, as of the date of publication. Microsoft has spent a lot of time implementing the framework and considering opportunities for Microsoft technology to help organizations with their cybersecurity capabilities, but cybersecurity is highly fact-specific and this paper addresses only generally applicable concepts and may not perfectly align with all of your organization's needs.*

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