



Microsoft Build After Party /w MVP

소프트웨어 개발과 엔지니어링 시스템의 미래

Microsoft Dev Box

엔지니어링 시스템을 통해 개발자 속도 증진할 수 있는 환경 제공 Part1

2022.6.25(토)



강사소개



권순만(Kwon Sooman)

現 Metanet Tplatform 기업 및 기관에서 Microsoft 제품 및 Cloud 서비스를 활용하여 IT 관리자 및 사용자들의 생산성을 높일 수 있도록 지원하는 팀에서 활동 중



목차

- 1 현 개발팀 환경과 직면한 과제
- 2 Microsoft Dev Box 소개





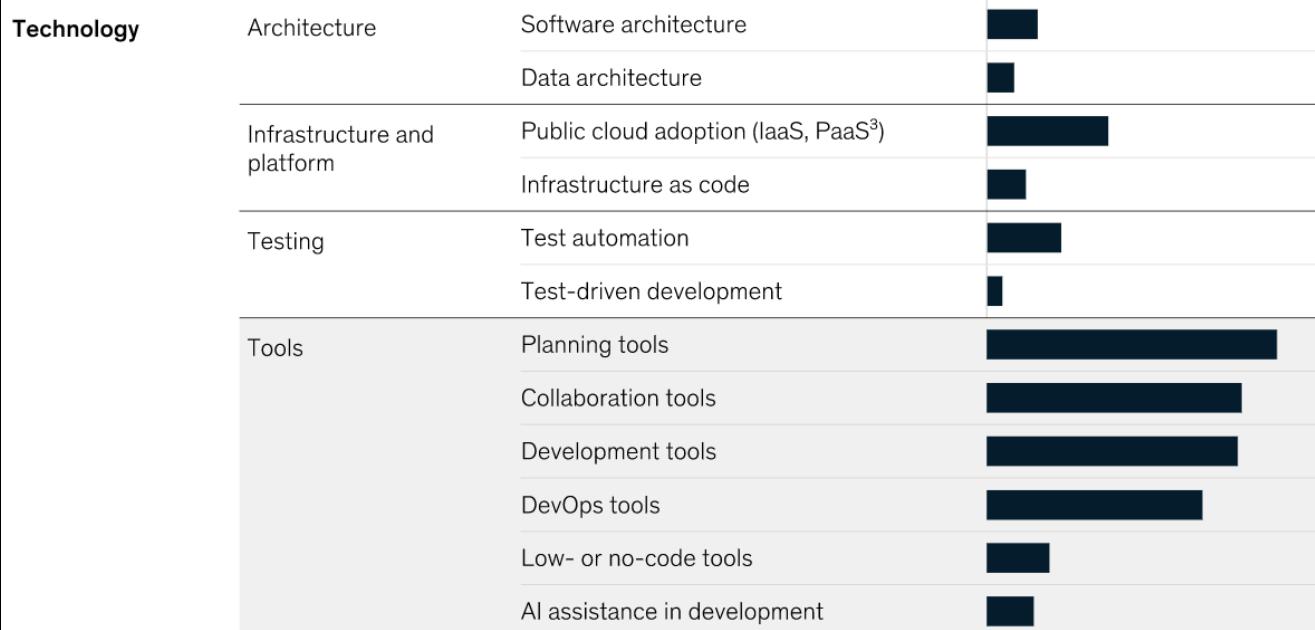
알맞은 개발 도구를 사용하면
최대 개발의 생산성을 향상
65% 이상의 혁신

Source: McKinsey Developer Velocity

Tools, product management, culture, and talent management have the greatest impact on Developer Velocity and business performance.

Relative importance¹ to overall business performance indicators,² %

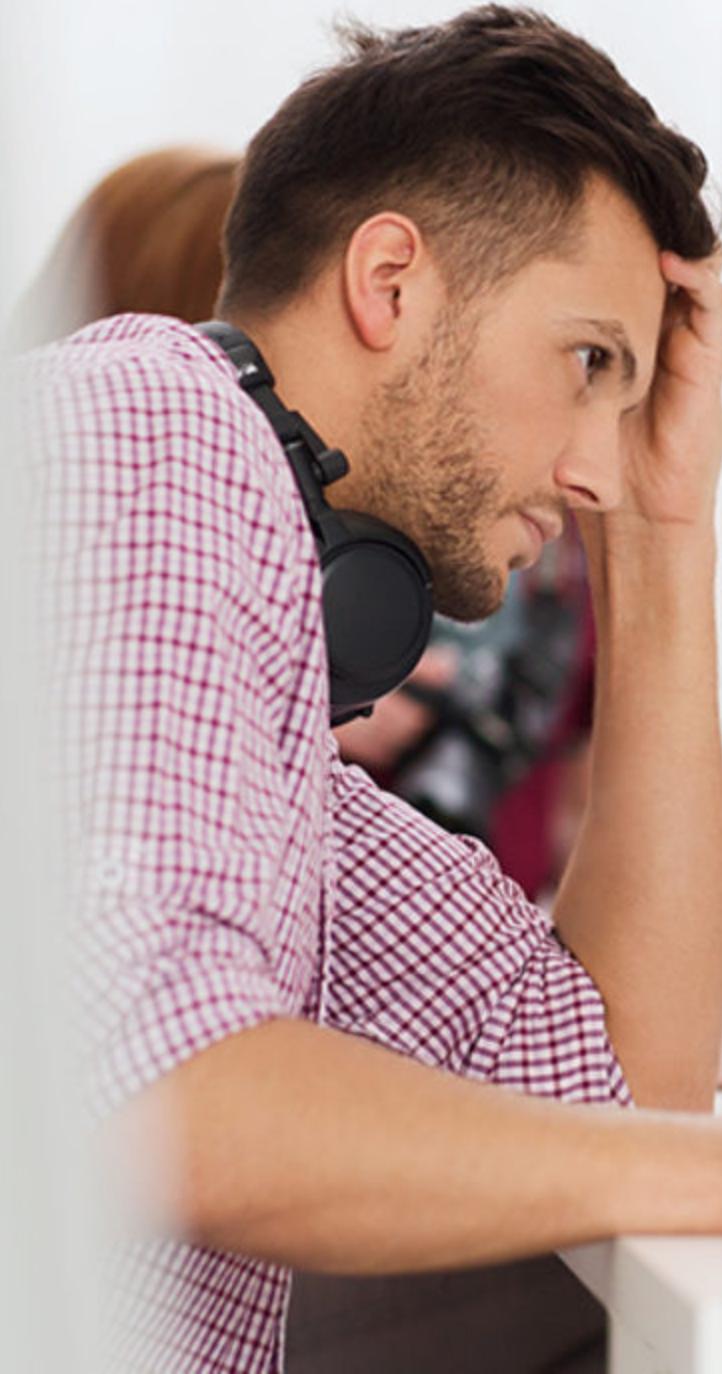
■ Foundational drivers
 $R^2 = 0.6, n = 440$



<https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/developer-velocity-how-software-excellence-fuels-business-performance>

더 빠른 개발능력 소유자
보유하고 있는 조직의 더
높은 수익과 성장

Source: McKinsey Developer Velocity



물리적 PC에 대한 의존도
개발자의 당면 과제



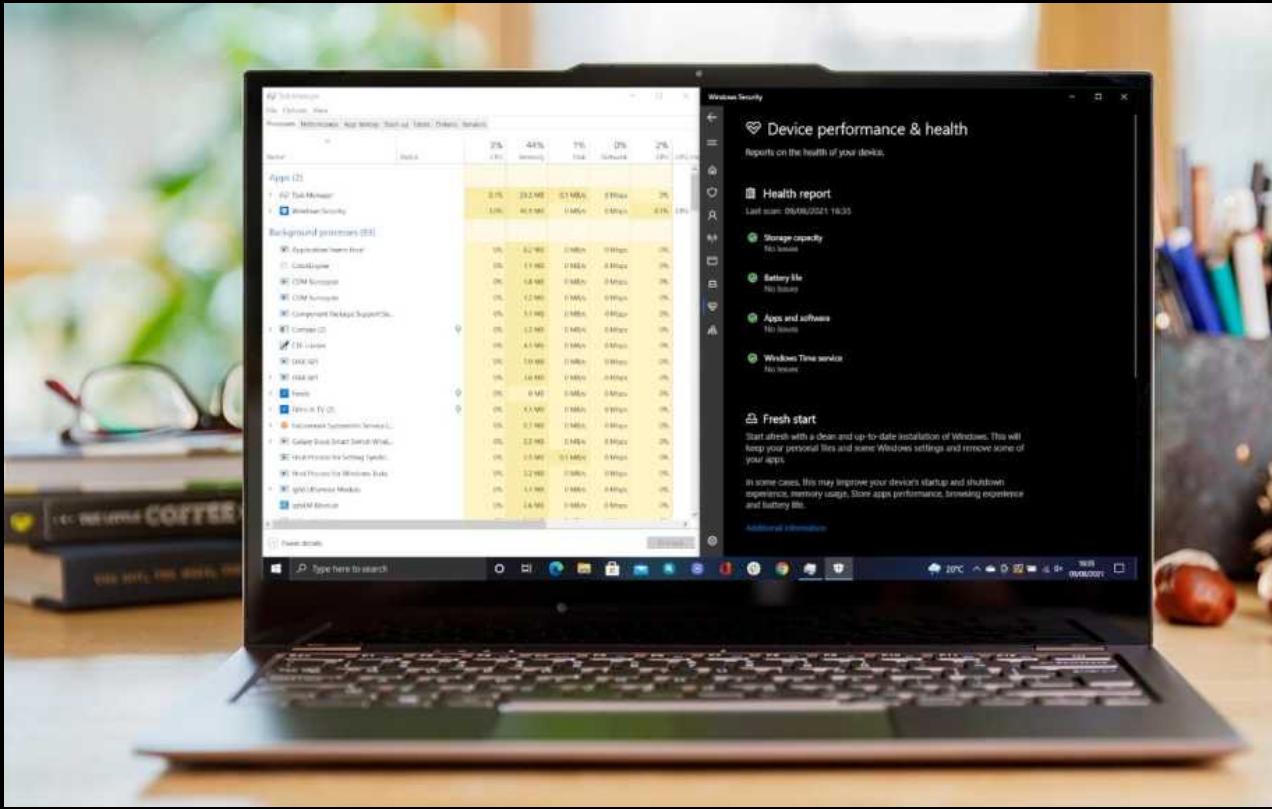
부족한 로컬
하드웨어



낙후된 개발
환경



제한된 네트워크
대역폭



물리적 PC에 대한 의존도 개발자의 당면 과제



부족한 로컬
하드웨어



낙후된 개발 환경



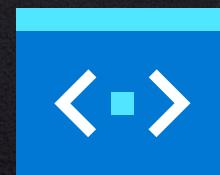
제한된 네트워크
대역폭



물리적 PC에 대한 의존도
개발자의 당면 과제



부족한 로컬
하드웨어



낙후된 개발
환경



제한된 네트워크
대역폭



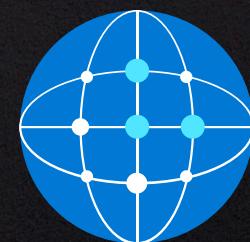
물리적 PC에 대한 의존도 개발자의 당면 과제



부족한 로컬
하드웨어



낙후된 개발
환경



제한된 네트워크
대역폭



물리적 PC에 대한 의존도 조직 & 팀의 당면 과제



다양한 개발 팀의
다양한 하드웨어
요구사항



글로벌한 팀
관리



새로운 보안
위협



물리적 PC에 대한 의존도 조직 & 팀의 당면 과제



다양한 개발 팀의
다양한 하드웨어
요구사항



글로벌한 팀
관리



새로운 보안
위협



물리적 PC에 대한 의존도 조직 & 팀의 당면 과제



다양한 개발 팀의
다양한 하드웨어
요구사항



글로벌 팀
관리



새로운 보안
위협



물리적 PC에 대한 의존도 조직 & 팀의 당면 과제



다양한 개발 팀의
다양한 하드웨어
요구사항



글로벌한 팀
관리



새로운 보안
위협



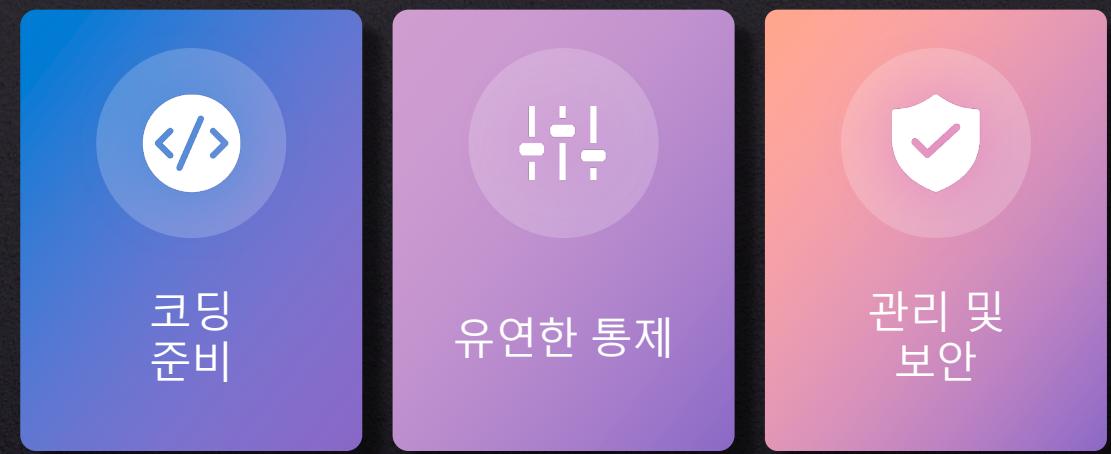
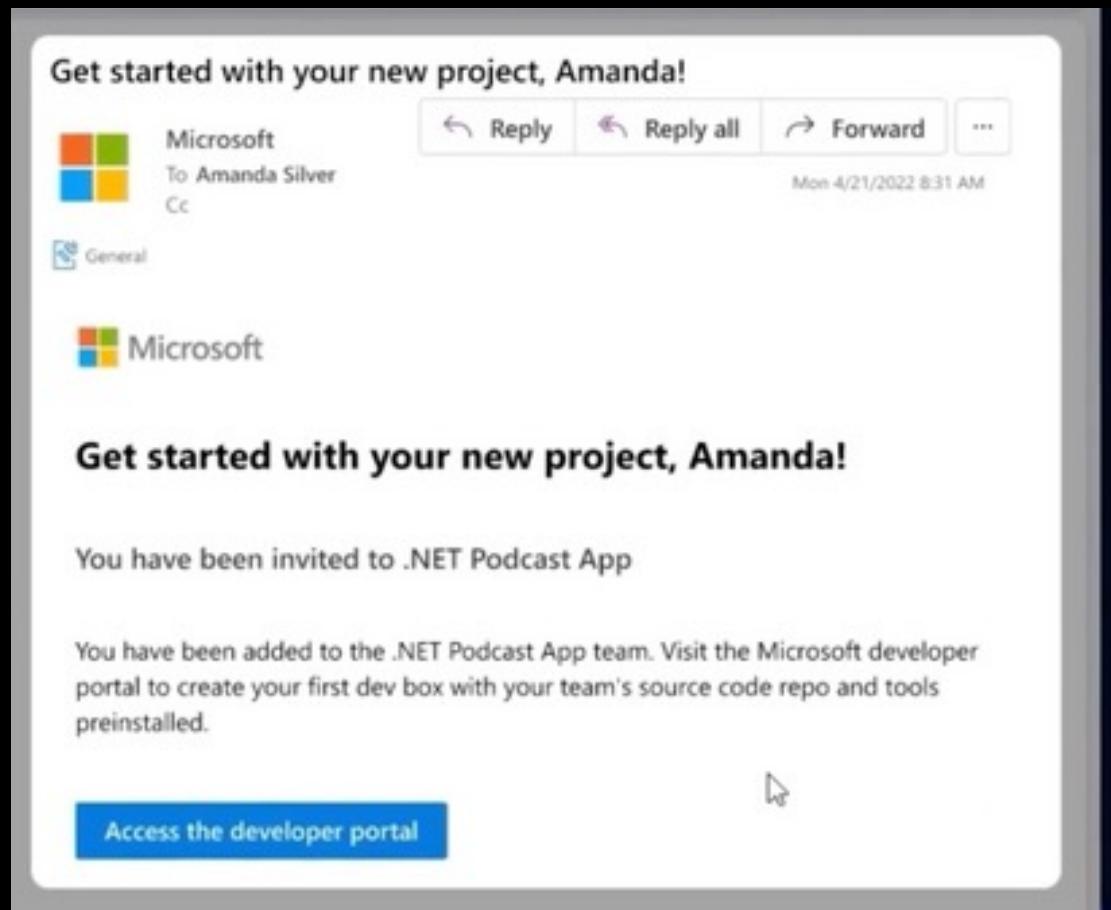
Announcing

Microsoft Dev Box

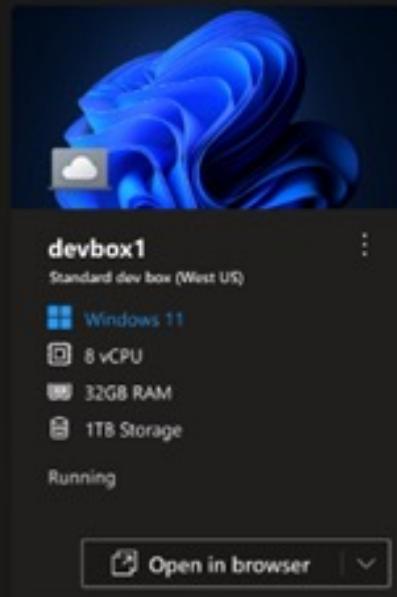
Ready-to-code, secure dev
workstations for a hybrid team

Sign up for the private preview
aka.ms/devbox-signup

Microsoft Dev Box로 셀프 서비스 Dev 환경 활성화



Projects > .NET Podcast App
Contoso Studios



Dev Box 기능



개인별 워크스테이션 소유



모든 도구 및 모든 워크로드



모든 디바이스에 배포

Projects > .NET Podcast App

Contoso Studios



devbox1

Standard dev box (West US)

Windows 11

32 vCPU

128GB RAM

2TB Storage

Running

Open in browser

Add a dev box



Name

Data-engineering

Dev box pool

Data engineering (West US)

32 vCPU 128GB RAM 2TB Storage

[See all pools](#)

This dev box will hibernate at 6:00 pm every day

Dev Box 기능



개인별 워크스테이션 소유

- 셀프 서비스를 통한 Dev Box 수명 주기 관리
- 작업 중심 이미지로 바로 코딩 가능
- Dev Box 최대 절전 모드 및 간편한 재시작



모든 도구 및 모든 워크로드



모든 디바이스에 배포

2-1. Dev Box 할당 및 활성화

The screenshot shows the Microsoft Outlook application window. On the left, the ribbon navigation bar includes File, Home, Send / Receive, Folder, View, and Help. Below the ribbon is a toolbar with icons for New Email, Share to Teams, Unread/ Read, and various search and filter options. The main pane displays a list of emails under the 'Today' section. One email from 'Microsoft' is selected, titled 'Get started with your new project, Amanda!'. The message body contains a welcome message and information about being added to the .NET Podcast App team. It includes a call-to-action button labeled 'Access the developer portal'. The bottom right corner of the message pane shows the Microsoft logo.

File Home Send / Receive Folder View Help

New Email Share to Teams Unread/ Read

Favorites

- Inbox
- Sent Items

amanda@contoso.com

- Inbox
- Drafts
- Sent Items
- Deleted Items
- Archive
- Conversation History

Junk Email [47]

Outbox

RSS Subscriptions

Scheduled

Search Folders

Focused Other By Date ↓

Today

Microsoft
Get started with your new project, Amanda!
You have been invited to .NET Podcast App
8:31 AM

Yesterday

Wanda Howard
Tomorrow's Sync
Hey team, can you let me know when the next ite...
Sun 2:45 PM

Ashley McCarthy
Contoso FY21 Product Review
Hi everyone! Here is the pre-read for the product...
Sun 11:01 AM

Gaurav Sareen on Yammer
Announcement C + T Weekly
Gaurav Sareen started a new Yammer thread
Sun 10:44 AM

Collin Ballinger, Elvia Atkins
Affinity Buckets
Please see the latest breakdown of our affinity bu...
Sun 10:20 AM

Daisy Philips
Remote Yoga Workout
Hey everyone! I'm excited to host the first remote...
Sun 9:05 AM

Robin Counts
FW: Volunteers Needed
Hey Alumni! We're looking for volunteers for the...
Sun 9:05 AM

Benefits
Summary Plan Descriptions (SPDs)
Hi everyone, we're happy to announce that each...
Sun 9:05 AM

Get started with your new project, Amanda!

Microsoft To Amanda Silver Cc General

Mon 4/21/2022 8:31 AM

Microsoft

Get started with your new project, Amanda!

You have been invited to .NET Podcast App

You have been added to the .NET Podcast App team. Visit the Microsoft developer portal to create your first dev box with your team's source code repo and tools preinstalled.

Access the developer portal

f t y in M

Copyright 2022, Microsoft Corporation
Privacy statement | Unsubscribe

Microsoft Corporation, One Microsoft Way, Redmond WA 98052 USA

Microsoft

[+ Add dev box](#)

2-2. Dev Box 할당 및 활성화

- ☰
- 🏠 Overview
- 📁 Projects

Projects > .NET Podcast App

Contoso Studios



devbox1

Standard dev box (West US)



Windows 11



32 vCPU



128GB RAM



2TB Storage

Running

⋮

[↗ Open in browser](#)[↗ Open in Remote Desktop](#)

Dev Box 기능

Microsoft Azure Search resources, services and docs Varun Gupta CONTOSO STUDIOS

Home > Projects > .Net Podcast App | Dev box pools

Add Refresh Delete Feedback

Search Filter for any field... Subscription : 2 of 2 selected Location : All Tags : All Add filter

Showing 3 to 3 of 3 results.

No grouping List view

Name ↑	Dev box definition ↑	Network connection ↑	Status ↑
Standard dev box	standard-definition	Network-West (West US)	No errors found
Data engineering	dataeng-definition	Network-East (East US)	No errors found
Privileged access workstation	paw-definition	Network-West (West US)	No errors found

Overview Activity log Access control (IAM) Tags Settings Properties Locks Environment configuration Mappings Manage Dev box pools Environments Monitoring Alerts Logs



개인별 워크스테이션 소유



모든 도구 및 모든 워크로드

- 프로젝트 요구사항에 맞는 전용 컴퓨팅
- Windows에서 실행되는 모든 IDE, SDK 도구 배포
- 데스크톱, 모바일 및 웹을 위한 개발 환경
- WSL 및 중첩된 가상화(nested Virtualization) 지원



모든 디바이스에 배포



3. Dev Box VM 추가

[+ Add dev box](#)

- ☰
- 🏠 Overview
- Projects

Projects > .NET Podcast App

Contoso Studios



devbox1

Standard dev box (West US)

Windows 11

32 vCPU

128GB RAM

2TB Storage

Running

[Open in browser](#) | ▾

Microsoft Endpoint Manager admin center

Home > Reports >

Endpoint analytics | Overview

Search (Ctrl+ /)

Enroll and reboot devices to see scores and insights. For enrolled dev...

Overview Device scores

Proactively optimize the user experience and track your progress Learn more

Refresh

Endpoint analytics score ⓘ

Endpoint analytics score | Baseline ⓘ

67 | 50

Score categories ⓘ

Metric	Score
Startup performance	Green bar

Dev Box 기능



개인별 워크스테이션 소유



모든 도구 및 모든 워크로드



모든 디바이스에 배포

- 모든 OS 또는 브라우저에서 액세스 가능
- 최신 Windows 버전에서 동작
- 보안 및 중앙 관리

6-1. Dev Box 관리

Home > New >

Create a network connection

[Basics](#) [DevCenters](#) [Tags](#) [Review + create](#)

Resource details

Select the subscription in which the network configuration will be created.

Subscription *

ContosoSub

Resource group *

ContosoPlatform_RG

[Create a resource group](#)

Network connection details

Domain join type *

-
- Azure active directory join
-
-
- Hybrid Azure active directory join

Name *

Network-West

Virtual network *

ClontosoPlatform_VNET (West US)

Subnet *

ContosoPlatform_Subnet

172.20.0.0 - 172.20.0.255

Microsoft Endpoint Manager ...

https://endpoint.microsoft.com

6-2. Dev Box 관리

Microsoft Endpoint Manager admin center

Home > Reports

Search (Ctrl+ /)

Overview

Device management

- Device compliance
- Device configuration (preview)
- Group policy analytics (preview)
- Windows updates (preview)
- Cloud attached devices (preview)

Endpoint security

- Microsoft Defender Antivirus
- Firewall

Analytics

- Endpoint analytics

Intune data warehouse

- Data warehouse

Azure monitor

- Diagnostic settings
- Log analytics
- Workbooks

Monitor the health and activity of your endpoints

Use Intune reporting to monitor endpoint compliance, health, and trends in your organization.

Organizational reports
Generate a summarized report of the latest, overall state of your endpoints and apply filters to refine your data.

Trends reports
Create a report from historical data to help you identify patterns and trends over time.

Advanced reports
Create custom queries and visualizations from raw data with the help of Log Analytics and Azure monitor workbooks.

Windows taskbar icons: Start, Search, Task View, Chat, File Explorer, Edge, Taskbar settings

Microsoft Azure

Search resources, services, and docs (G+)

Home > Net Podcast App Project

Net Podcast App Project | Members

Group

Overview

Diagnose and solve problems

Manage

- Properties
- Members**
- Owners
- Roles and administrators
- Administrative units
- Group memberships
- Applications
- Licenses
- Azure role assignments

Add members Remove Refresh Bulk operations

Direct members All members

Search by name Add filters

Name	Type
Adele Vance	User
Alex Wilber	User
Debra Berger	User
Diego Siciliani	User
Megan Bowen	User
Pradeep Gupta	User

팀 기능



작업에 집중



특정 프로젝트별 환경 제공



비용 최소화

Search resources, services and docs

Create a dev box pool

Feedback

Description : 2 of 2 selected Location : All Tags : All Add filter

Basics

Name * ⓘ Data science

Dev box definition * ⓘ ds-definition

See all definitions | Create a definition

Network connection * ⓘ Network-West3 (West US 3)

Network-West3 (West US 3)

Network-West (West US)

Network-EU (West Europe)

Dev box definition ↑ Network connection ↑

Dev box definition	Network connection
standard-definition	Network-West (West US)
dataeng-definition	Network-East (East US)
paw-definition	Network-West (West US)

Auto-start

Enable auto-start ⓘ

Auto-stop

Enable auto-stop ⓘ

Dev box limits

Dev boxes per user ⓘ

팀 기능



작업에 집중

- 별도의 프로젝트 및 역할에 대한 개발자 상자 만들기
- 각 프로젝트에 적합한 컴퓨팅 할당
- 공유 이미지 갤러리를 사용하여 이미지 관리
- 프로젝트 요구 사항을 충족하도록 네트워크 구성 설정



특정 프로젝트별 환경 제공



비용 최소화

Microsoft Azure

Home > Projects >

.Net Podcast App

Project

Search

Delete

Overview

Activity log

Access control (IAM)

Tags

Settings

Properties

Locks

Environment configuration

Mappings

Manage

Dev box pools

Environments

Monitoring

Alerts

Logs

Automation

Export template

Support + troubleshooting

New support request

Search resources, services and docs

4. Dev Box 위치

View Cost | JSON View

Resource group (change) : Contoso_RG

Location : West US

Subscription (change) : VS_sub

Subscription ID : b9184e8a-0517-4848-8c79-db9aa4716efd

Tags (change) : Click here to add tags

DevCenter : Contoso IT

Environments : 0

Description (change) : .Net podcast app project

Centrally manage developer workstations and environments in the cloud

Projects enable your development teams to self-serve developer environments and workstations using approved templates. [Learn more](#)

 Set project access

Assign owners and contributors to define the permissions within this project. Owners have unlimited privileges, and contributors can deploy environments

[Edit access](#)

 Manage dev box pools

Dev box pools allow developers to easily create pre-configured workstations in the cloud. Dev boxes can be hosted in multiple regions to support distributed teams.

[View](#)

 Deploy environments

Developers use the command line to deploy environments within this project. Within a project, they can choose from the environment types that have been configured here.

[Learn more](#)

Microsoft Azure Search resources, services, and docs (G+/-)

Home > Contoso Studios >

Create a Project

PREVIEW

Validation passed.

Basics Tags Review + Create

Create Fidalgo Projects and enable your development teams to self-serve developer environments using the approved templates. You can also centrally manage all the developer environments per project.

Resource details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription * ContosoSub

Resource group * ContosoPlatform_RG Create new

Project details

DevCenter * Contoso Studios

Name * NetPodcastApp

Description

팀 기능



작업에 집중



특정 프로젝트별 환경 제공

- 프로젝트 전반에 걸쳐 팀 구성
- AAD에서 그룹 액세스 정의
- 각 지역별 전용 풀 생성



비용 최소화

5. Dev Box 팀 관리

Contoso Studios

DevCenter | PREVIEW | Directory: Contoso

Search (Ctrl+ /) Delete

Overview Activity log Access control (IAM) Tags

Resource group : ContosoPlatform_RG Subscription ID : 0db9eb1b-4884-4027-9ad5 Subscription : ContosoSub Location : West US 2

Projects : 0 Environments : 0 Created by : adelev@contoso.com Catalogs (change) : 0

Tags (edit) : Click here to add tags

View Cost JSON View

Centrally manage your organization's developer environments

DevCenters enable development teams with self-service of curated tools and environments. DevCenters cannot be deleted unless they contain no projects. [Learn more](#)

Manage identities
Managed identities are used by the service to perform deployments on behalf of the developers, so they do not need to be granted individual access to the subscriptions.

[Configure identity management](#)

Attach catalogs
Catalogs are hosted in GitHub or Azure DevOps repositories, and contain 'infrastructure as code' templates that development teams could use to deploy environments.

[Add catalog](#)

Set up environment types
Environment types group environments by their intended purpose, and helps to configure different settings for different types of environments.

[Add environment type](#)

Define projects

Map subscriptions

Name * ⓘ Data science

Dev box definition * ⓘ ds-definition

See all definitions | Create a definition

Network connection * ⓘ Network-EU (West Europe)

See all network configurations

Auto-start

Enable auto-start ⓘ Yes No

Auto-stop

Enable auto-stop ⓘ Yes No

Stop time ⓘ 7:00:00 PM

Time zone ⓘ (UTC+01:00) Amsterdam, Berlin, Bern, Rome, Stockholm

Day(s) of week ⓘ Mon Tue Wed Thu Fri
 Sat Sun

Dev boxes will auto-stop every night at 7:00 PM Central European Time

Dev box limits

Dev boxes per user ⓘ

팀 기능



작업에 집중



특정 프로젝트별 환경 제공



비용 최소화

- 시작/중지 일정 설정
- 실행중인 VM을 일시중지 할 수 있는 최대 절전 모드
- 풀(Pool) 및 프로젝트 전반의 비용 모니터링

6. Dev Box 스케줄 관리

...

Delete | Feedback

Subscription : 2 of 2 selected | Location : All | Tags : All | Add filter

	Dev box definition ↑↓	Network connection ↑↓	Status ↑↓
standard-definition	Network-West (West US)	No errors found	
dataeng-definition	Network-East (East US)	No errors found	
paw-definition	Network-West (West US)	No errors found	

Basics

Name * ⓘ

Data science

Dev box definition * ⓘ

ds-definition

[See all definitions](#) | [Create a definition](#)

Network connection * ⓘ

Network-EU (West Europe)

[See all network configurations](#)

Auto-start

Enable auto-start ⓘ

 Yes No

Auto-stop

Enable auto-stop ⓘ

 Yes No

Dev box limits

Dev boxes per user ⓘ

Complimentary services

GitHub

Codespaces



Linux



Repos on
GitHub

Cloud native apps

Including: web apps,
APIs, backends



GitHub.com

Operating
system

SCM
Support

Target
workloads

IT
Mgmt.

Microsoft

Dev Box



Windows



Any version
control system

Any workload

Including: Desktop, IoT,
mobile, games, & more
(Windows or cross-plat)



Endpoint
Manager

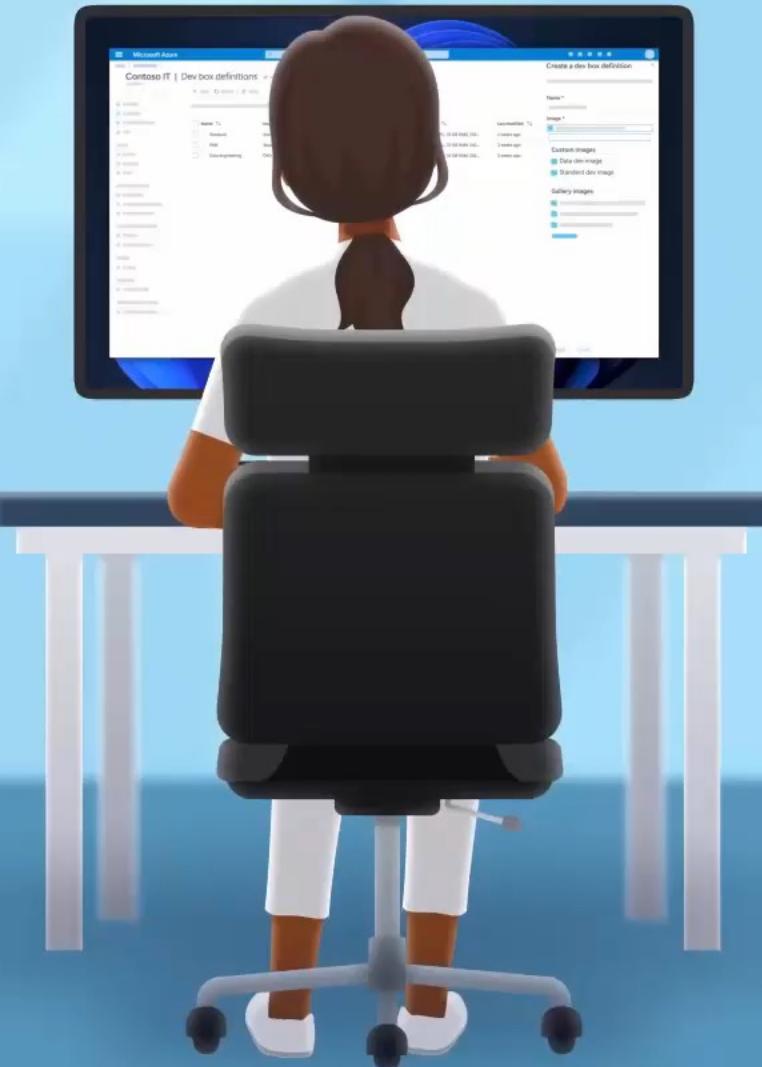


Microsoft
Azure

IT manager



Developer manager



Developer





Next steps

Microsoft Dev Box

Ready-to-code, secure dev
workstations for a hybrid team

private preview 신청하기
aka.ms/devbox-signup

Microsoft Dev Box 리소스
aka.ms/devbox-blog



강의 피드백

세션코드는 “A1”

많은 참여
부탁드립니다.