



# Specialized Cybersecurity Software Development Company

with 4 R&D Offices in Eastern Europe



# // Agenda

Company Overview

Business Model and Differentiators

Specialized R&D Provider

Mature Agile Delivery Process

Managed Agile Teams

What Do We Do

Our Expertise

Customers

Security

Company Growth & Structure

Dedicated Teams

Experience Highlights

Q&A and Next Steps



# // About Apriorit

## FOUNDED

# 2002

In Dnipro, Ukraine

## TEAM

# 400+

15 R&D Teams  
6 QA Teams

## COMPLETED JOBS

# 675+

## COMMITTED CLIENTS

# 55+

Software vendors and  
SaaS providers

## BASED IN

# 4

Engineering  
departments



### HEADQUARTERS

Needham, Massachusetts, USA

### EU OFFICE

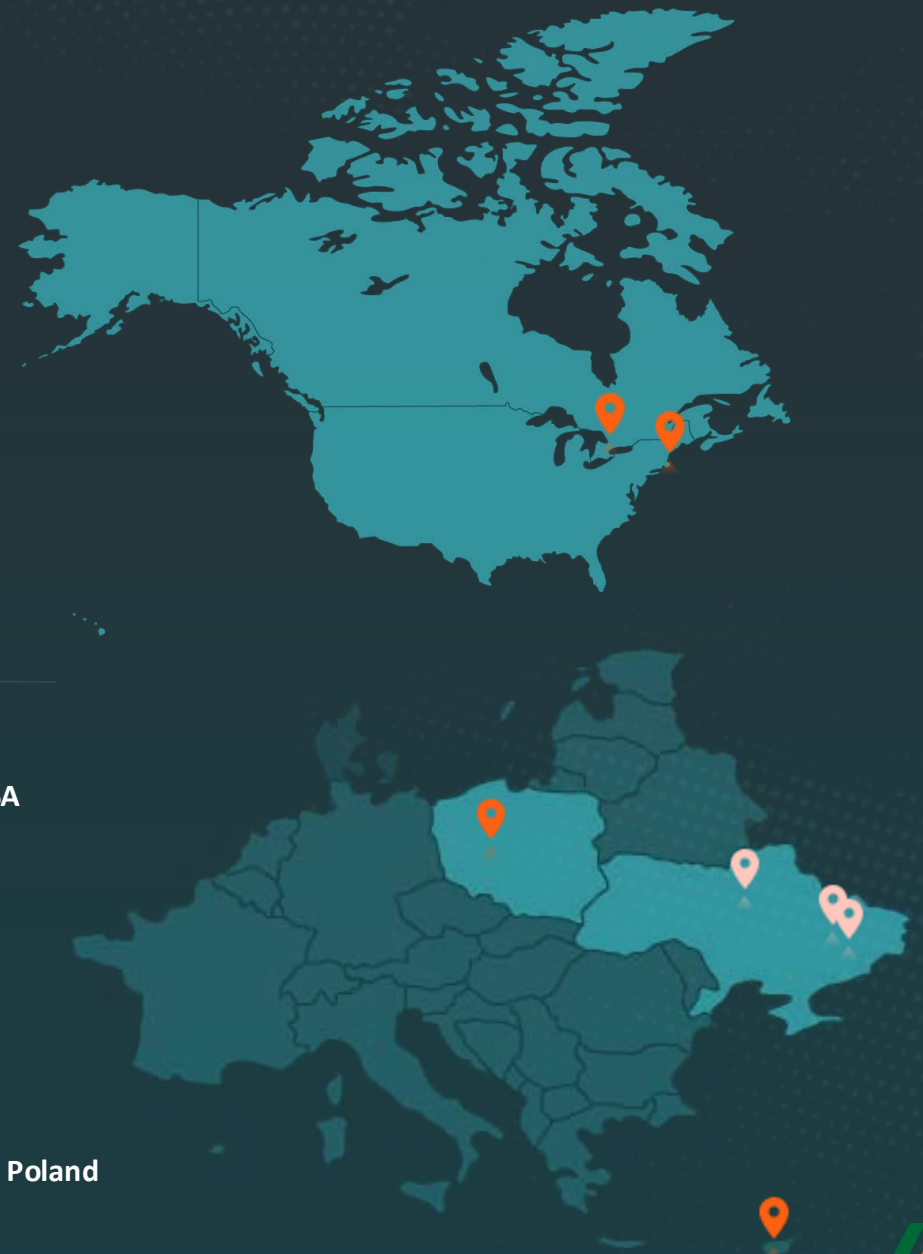
Poznań, Poland  
Nicosia, Cyprus

### CANADIAN OFFICE

Toronto, Canada

### DEVELOPMENT OFFICES

4 in Eastern Europe, Ukraine, Poland



# // Industry Recognition & Certificates

## HIGHLY REGARDED BY LEADING GLOBAL IT EXPERTS



Clutch Top 1000 Companies 2023



Clutch Top Software Developer 2024



Clutch Top Cybersecurity Company 2024



Clutch Top AI Company 2024



Gold Microsoft Partner



TechBehemoths Top Software Development Company in US 2023

## R&D AND QA SPECIALISTS GUIDED BY INDUSTRY STANDARDS



## SERVICE QUALITY, HIGHLY EVALUATED BY THE WORLD'S LEADING IT EXPERTS



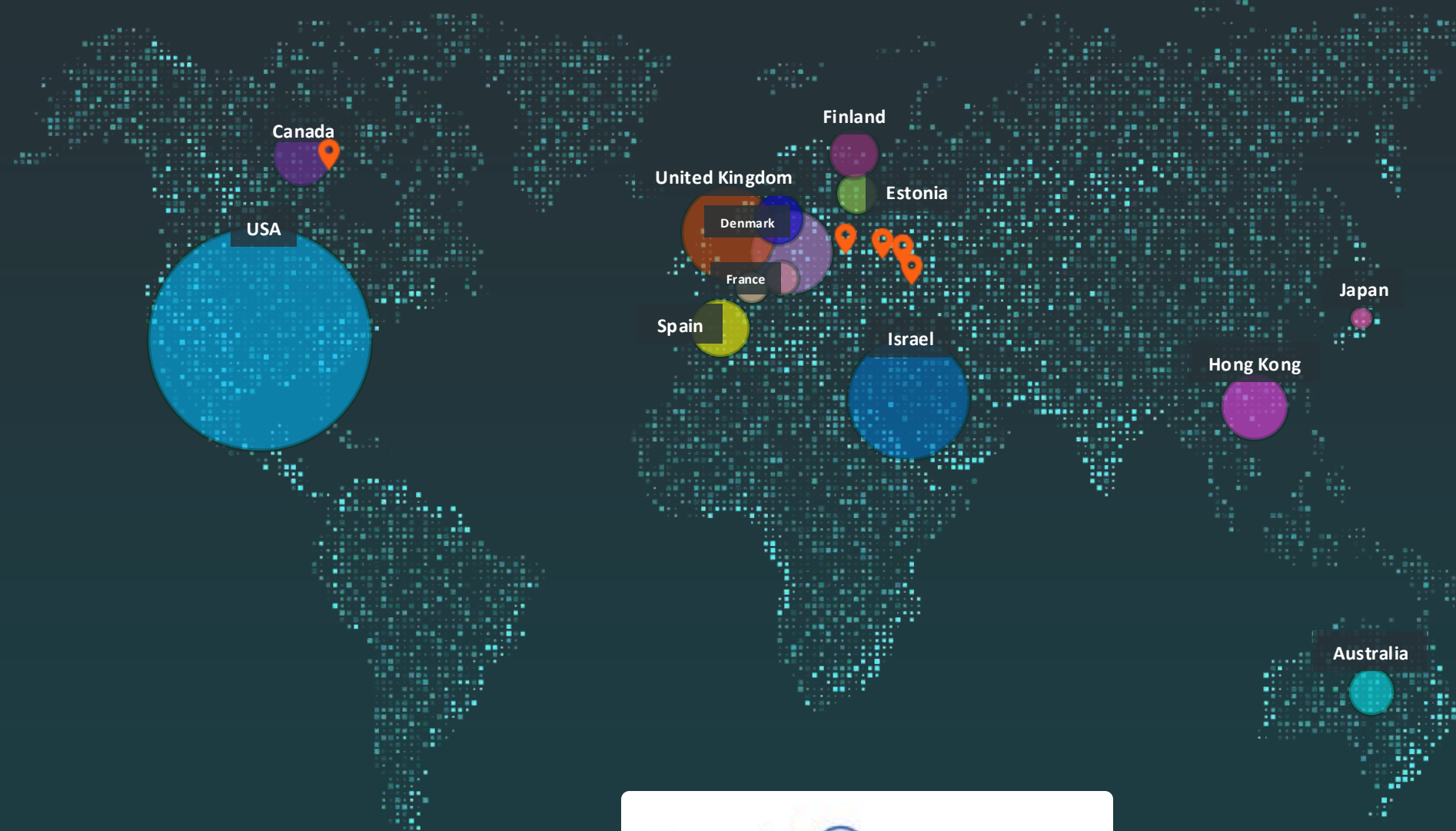
ISTQB Foundation Level




Microsoft Technology Associate: Database Fundamentals

# Clients

Country	Total 2023
USA	65,88%
Israel	11,62%
United Kingdom	8,21%
Germany	4,33%
Hong Kong	2,28%
Canada	2%
Spain	1,68%
Finland	1,38%
Denmark	1%
Estonia	0,33%
Australia	0,30%
France	0,24%
Korea	0,26%
Switzerland	0,02%
Japan	0,01%



REVIEWED ON   
**Clutch** 38 REVIEWS

# // Specialized R&D Provider

Apriorit delivers **Managed R&D teams** to the selected range of software segments using proven **Agile process**.

## What makes us special?

- **22+ years in Cybersecurity**
- **Niche expertise** and ability to solve complex technical challenges
- **Delivery excellence and high-quality** work with a strong focus on thorough testing and documentation
- **Secure Software Development Life Cycle**
- **Long-term commitment and reliability**
- **Fast formation of hand-selected expert teams**



# // Mature Agile Delivery Process

Apriorit has adopted a flexible Agile delivery process that can be applied for different types of projects. Our expertise follows the specifics of our assignments.

- Measurable and controllable research stage
- Business analyst working as Product Owner in our team
- Self-driven development teams
- Clear communication at each level
- Sprint-based or Kanban-based planning
- Measurable team performance (EVA, team velocity, quality metrics)

Apriorit always provides **Project Manager/Scrum Master** for any project, whether it is fixed price or dedicated team. All our teams are managed and thus we take **accountability** for the project results.

- Efficient and sufficient project **communication**
- Experienced **estimation** and planning
- Optimizing the client's **management overhead**
- **Cross-project** resource management



# // What We Do

Apriorit provides expert software engineering services to technology companies worldwide, covering the entire software R&D lifecycle.

## How can we help you



### Extend your team

Get expert the R&D specialists to cover specific areas of your project



### Speed up product launch

Accelerate product development



### Deliver an MVP quickly

Bring an MVP to market with a limited budget



### Hard-to-find skills

Add a specialist with rare skills to your team when needed





# // How Apriorit Can Help Your Business Grow

## Attract investments and keep your budget under control

- Prove your investment potential
- Cost-efficiently scale from an MVP to a full-fledged product
- Partnership models that fit your budget

## Get the best solution for your needs

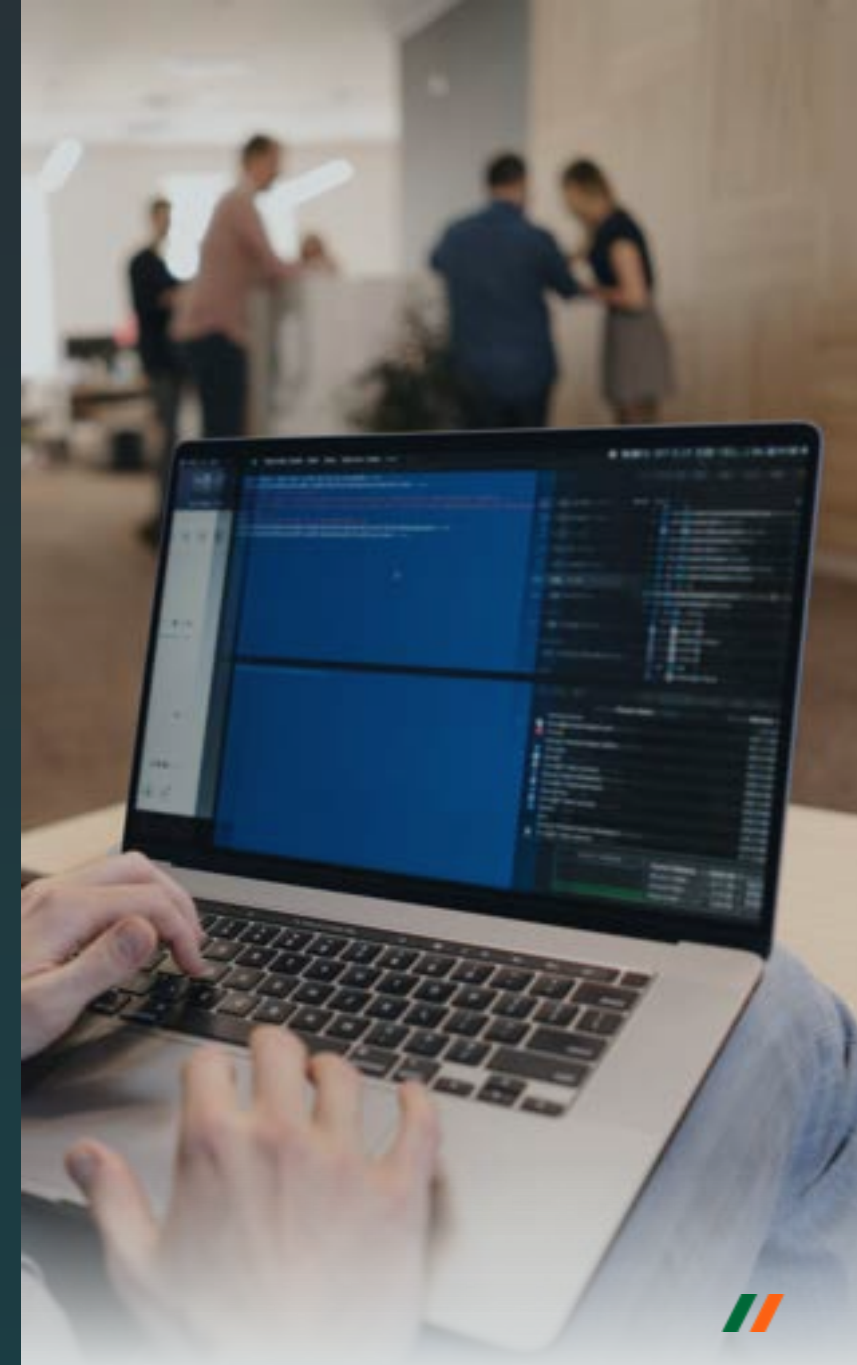
- Careful tech stack selection
- High product security
- High code quality
- Technical solutions for unique business challenges

## Launch and support your business project

- Quick IT product launch
- Functional extension and customization
- Expanded product accessibility
- Continuous support of legacy solutions

## Establish an efficient long-term partnership

- Quick access to niche expertise
- Productive communication
- Predictable results and transparent processes
- Reduced administrative overhead
- Trusted and reliable partnership



# // Our Expertise



Cybersecurity



Reverse Engineering



Cloud



Blockchain



AI & ML



Embedded Software



Mobile Solutions



System Programming



Security Testing



Quality Assurance



Web Solutions



Remote Access and  
Management



Distributed Enterprise  
Networking



# // Cybersecurity-Focused R&D Provider

We set the bar for cybersecurity standards that others struggle to meet.

Turn top-level data protection and secure operations into your greatest business advantage. Leverage Apriorit's niche skills and **21+ years of cybersecurity expertise** to make your software:



**Competitive**



**Reliable**



**Performant**



**Secure**



# Cybersecurity Domain Layers

## SYSTEM LAYER

Inter process communication, processes control and monitoring, process interceptions, device management, bootloader, network filtering

## MIDDLE LAYER

Administrative panel & settings, databases, client-server architecture, remote access

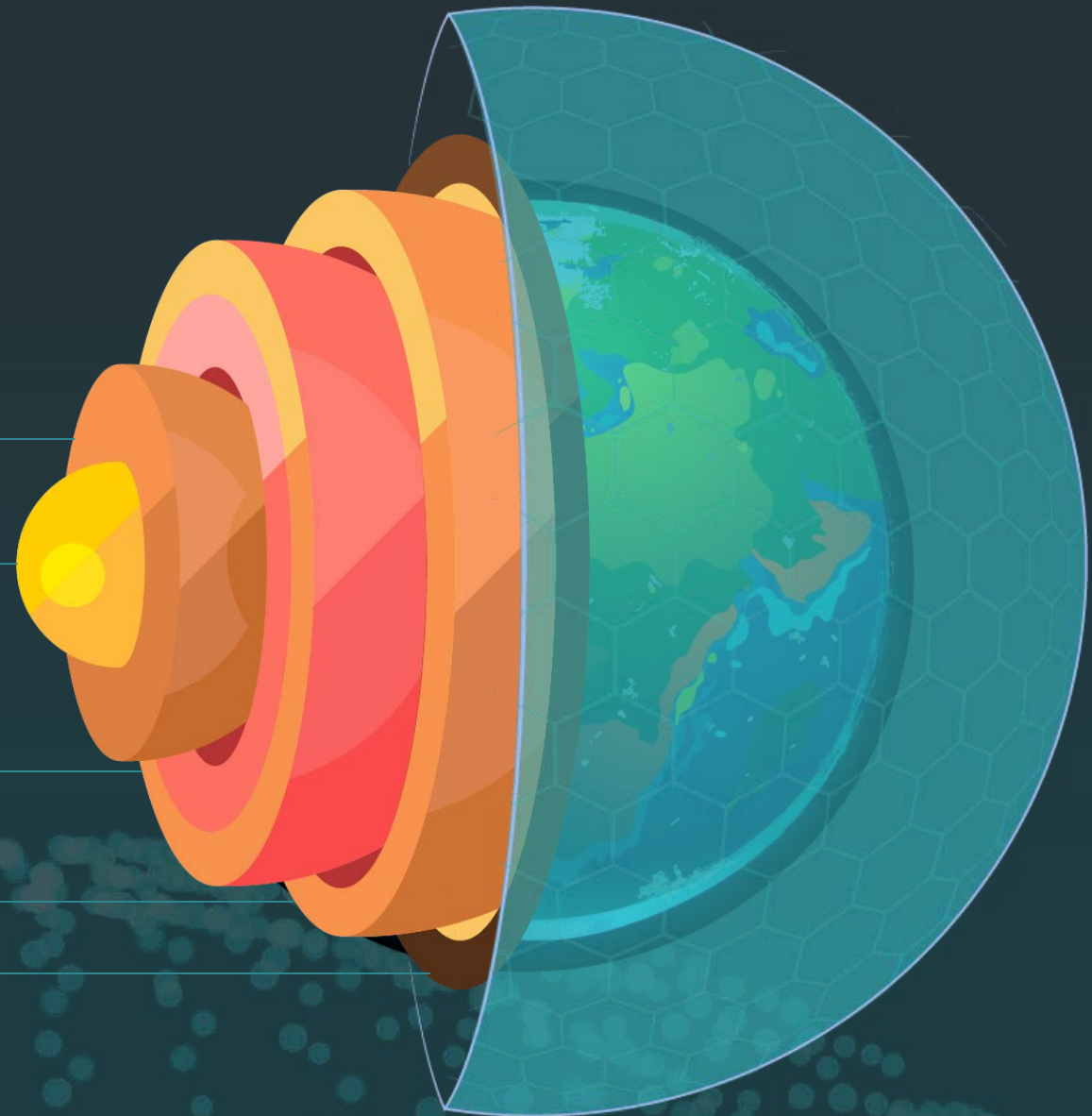
## WEB LAYER

SaaS, CSaaS, cloud development

## UNIFYING LAYER

Development, reversing, QA, PM, DevOps

## EMBEDDED LAYER



# // Security

We are protective of our clients' intellectual property.

## How Apriorit ensures data privacy



Sign an NDA with clients and employees



Restrict access to protect intellectual property



Maintain an Information Security Policy



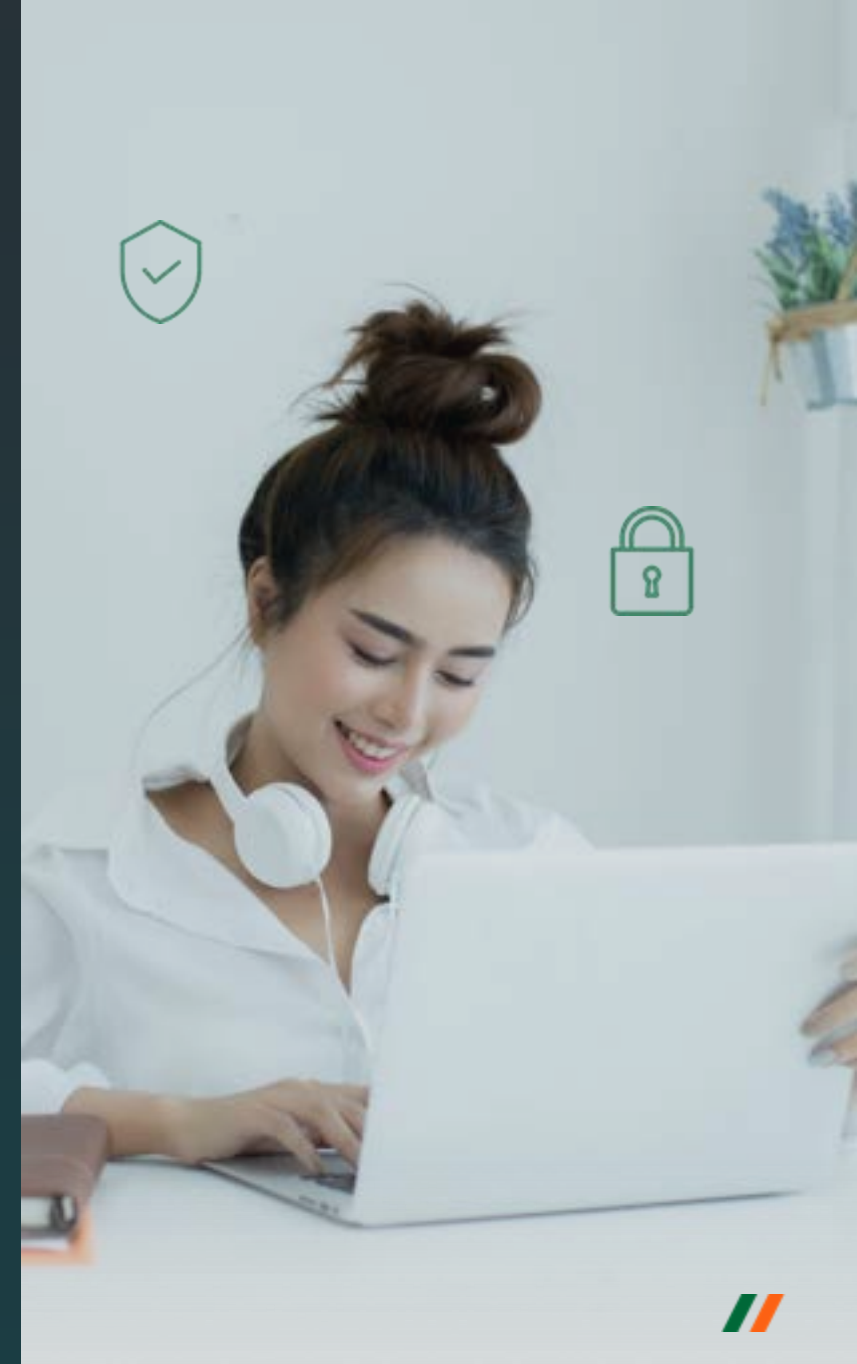
Secure our corporate IT infrastructure



Implement an IT Helpdesk Services for smooth operations



Audit employees activities (upon request)



# // Apriorit Dedicated Teams

Our goal is to integrate our specialists into your business processes to deliver value while ensuring high retention rate for employees

## How do we build a balanced team?

5%



Software architects

25%



Senior developers

50%



Middle developers

20%



Junior developers



Business analysts



Project managers



QA specialists



DevOps engineers

## Core values of our team

- Focus client satisfaction
- Innovation
- Professionalism
- Teamwork
- Self-motivation

## How we can scale your team

- Leverage bench strength
- Keep specialists permanently available
- Hire for your specific needs
- M&A with local companies



# // Transparent & Flexible Workflow

Working with Apriorit, you get to choose the cooperation model that is most comfortable and cost-efficient for your business:



Model and Criteria	Fixed price	Time and materials	Dedicated team*
Budget	Fixed	Flexible	Predicted
Deadlines	Predefined	Flexible	Long-term defined
Scope of work	Predefined	Dynamic	Long-term defined
Project size	Small	Small / Medium	Medium / Large
Average project duration	6 months or less	6 to 12 months	1+ years

\*80% of Apriorit clients leverage the Dedicated Team cooperation model.

# Our Expertise

 CLOSER LOOK





# // Our Expertise

## Virtualization and Cloud Computing

With virtualization and cloud adoption becoming a part of each enterprise agenda, there is a need of extending existent solutions and produce absolutely new ones.

### Our experience

- Desktop Virtualization
- Virtualization: OS | File System | Storage | IP Address
- Virtual Machine Access: Memory | File System | Image Parsing
- Hypervisor Management
- Cloud Storage Technologies
- Public, Private & Hybrid Cloud
- Cloud Audit and Data Protection
- Porting KVM for Android
- QEMU patching
- Physical devices pass-through

### Hypervisors

Microsoft Hyper-V  
VMware ESXi  
KVM  
VMware Workstation  
Oracle VM VirtualBox  
Parallels Desktop

### OS

Windows x86, x64  
Linux  
Mac OS



# // Our Expertise

## Digital and Enterprise Security

It's hard to imagine more broad and knowledge-demanding specialty than security. We work here for years, back and forward, far and wide.

### Our experience

- System monitoring (all levels and OS components)
- Rootkit and hook detection, targeted remediation
- Device security, blocking, whitelisting
- Email, chat, web security
- Bootloader technologies
- Windows, macOS containers orchestration
- Data on-the-fly encryption
- Monitor sensitive data in cloud
- Digital investigation tools
- E-Discovery tools
- Clipboard protection
- Printed data protection

### Components

End-point System  
Server and Sessions  
Data  
Network  
Web

### OS

Windows x86, x64  
Linux  
Mac OS  
Android  
iOS



# // Our Expertise

## Remote Access Management

At Apriorit, we understand all of the technology nuances of remote access and can ensure the service quality and reliability that you need.

### Our experience

- Remote Installation and update (incl. silent mode)
- Multimedia redirection without loss of quality
- Redirection of different objects (devices, video/audio streams, audio from sound card) using RDP packets
- Multi-platform remote desktop support
- Web and desktop RDP clients
- Sharing of USB devices over the network and Internet
- Redirection of local printers and scanners to operate with Windows-based server applications
- Terminal session video recording and key logging
- Highly-secured custom video conferencing solutions
- Virtual smart and HID cards redirection using RDP packages

### Languages

C/C++  
C#  
Objective-C

### OS

Windows x86, x64      Android  
Linux                      iOS  
Mac OS

### Protocols

RDP                      Variety of open-  
VNC                      source and  
ARD                      custom protocols



# // Our Expertise

## System Management

Operating system behavior change, while interacting with deep level functions, requires great care, thorough architecture knowledge and quality checks.

### Our experience

- Internal system API research
- API Hooks, System Call Redirection
- System Snapshots and Restoration
- System Action Rollback
- Standard System Logon Dialog Replacement
- Creation of Custom File System Rules
- All-levels of System Activity Monitoring
- Custom Bootloader for advanced system change

## Technologies, tools, and frameworks we've used

### MacOS:

**Languages:** Swift

**Technologies and Frameworks:**

EndpointSecurity, SystemExtensions, NetworkExtensions, sandbox, Security, Framework, DriverKit, Cocoa, Accessibility API, AppKit, Foundation, SwiftUI

**Tools:** Xcode, VMware, Terminal

### Windows:

SQLite, OpenSSL, GoogleTest. Win API, COM, JSON, API hooks, WMI

**Tools:** Visual Studio

## Languages

C/C++

C#

Objective-C

Swift

Assembler

Scripting

## OS

Windows x86, x64

Linux x86, x64

macOS x64, arm64

Mobile platforms

# // Our Expertise

## Network Management

Apriorit's network specialists have extensive knowledge and experience at all network layers, network architectures, protocols, and systems.

### Our experience

- Full Network Activity Monitoring
- Traffic Parsing, Proxying, Load Balancing
- Bandwidth Management
- Network Packet Inspection and Filtering
- Instant Messenger Firewalls
- Network Disks and Shared Data Management
- Distributed Data Backup
- Centralized Maintenance Tasks for Large Systems
- Parent network control solutions

## Technologies, tools, and frameworks we've used

### Linux:

SELinux, TUN/TAP devices for VPN, Sockets, Network namespaces, Network block devices, BPF, eBPF, L2TP/IPSEC, IPVLAN, MACVLAN, WANem, Kubernetes, DPDK, Bird Internet routing daemon, Netfilter, Conntrack, Iptables, nftables

### Windows:

WFP filters, NDIS filters, Windows sockets 2, Windows Firewall, Network mini-redirector drivers, Network file system, Hyper-V extensible switch extension, RDMA, Network profiling, Network shell, Pktmon

### MacOS:

Network Extensions, System Network Configuration, networksetup

### Other tools:

Wireshark  
Wireguard  
OpenSSL

## Languages

C/C++

C#

Javascript

Swift, Objective C

# // Our Expertise

## Artificial Intelligence Development

Apriorit developers know how to use AI to solve complex tasks faster. We provide top-tier artificial intelligence development services.

### Our experience

- Video stream processing: motion detection, action detection, object classification, clip classification
- Image processing and 3D visualization for healthcare, entertainment, media, and scientific purposes
- Analysis and performance optimization for various types of neural networks
- Automated malware detection and analysis
- Natural Language Processing: chatbots, text classification, text summarization, text enhancing"
- Time series analysis

### Technologies, tools, and frameworks we've used

Keras + TensorFlow	OpenCV
NVIDIA TensorRT	MATLAB/MEX
Caffe2	GEDI
PyTorch	VGG Image Annotator
Pandas	FPGA

### Algorithms and AI models we've used

Image processing algorithms	VGG-16
	VGG-19
Dimensionality reduction algorithms	ResNet-50
	ResNet-101
Gradient boosting algorithms	ResNet-151
Text embeddings algorithms	Inception V3
Mask R-CNN	Stable Diffusion
GPT3	HuggingFace
Faster R-CNN	DALLE-3
YOLO	Midjourney

# // Our Expertise

## Blockchain-based Solution Development

Apriorit team delivers professional services for blockchain-based software design and development, smart-contract development, and independent penetration testing.

### Our experience

- Write ICO smart contracts
- Write specific smart contracts for non-ICO tasks like software licensing or logistics
- Audit the security of your smart contracts
- Develop applications that use blockchain APIs
- Build a private blockchain network based on Ethereum, Solana, Tezos, Polkadot, or other blockchains
- Web3 development
- Develop and support other blockchain-related products
- NFT projects development
- DeFi solutions building
- Configure complex cloud infrastructure for blockchain products
- Consulting services

### Supported languages

Solidity	Plutus
Go	Scilla
C++	Rust
C#	React
Michelson	Node
	Cairo

### Supported platforms

Ethereum	Tezos
EOS	Bitcoin forks
Hyperledger Fabric	Graphene-based blockchains (Bitshares, Steem, and others)
Dash	Solana
NEO	Polkadot
IOTA	Starknet network
Zilliqa	
Cardano	

# // Our Expertise

## Cloud Infrastructure Management Services

Apriorit provides all kinds of cloud infrastructure development and management services, ensuring smooth and efficient work with networks, virtual machines, cloud services, and databases.

### Our experience

- Cloud infrastructure design and development
- Deployment automation
- Support and maintenance
- Infrastructure monitoring
- Container orchestration
- Data protection solutions: backup, replication, encryption, secrets management
- Security audits
- DevOps consulting and transformation
- DevSecOps
- Continuous integration and continuous delivery implementation
- Performance reporting and optimization
- Identity and access management

### Technologies, tools, and frameworks we've used

Chef	Terraform	ZooKeeper
Puppet	Packet	SAML
QEMU	Vultr	Kerberos
KVM	Docker	Oauth
OpenStack	Swarm	Bearer
Helm	Kubernetes	Ansible
Kops	Consul	TeamCity,
Octopus	Bamboo	Jenkins

### Databases we work with

MS SQL Server	Firebase
PostgreSQL	MonogoDB
MySQL	Azure Cosmos DB
SQLite	DynamoDB
	ArangoDB

### Cloud platforms we work with

Amazon Web Services	Bare metal cloud servers
Google Cloud Platform	IBM Cloud
Microsoft Azure	Oracle Cloud



# // Our Expertise

## Mobile Device and Application Management

When adopting BYOD policy, security and controllability are two main concerns. Our projects deal with both.

### Our experience

- Device monitoring: screen video recording, event logging, application audit
- Device-hosted corporate data and application protection
- Rule-based device access
- Remote device management
- Application wrapping
- Per app VPN
- Parent control
- Customization operating system
- Device enrollment system
- Custom virtual network computing
- Data filtering and Data encryption
- Custom firmware for custom mobile devices

### Frameworks and Libraries

Android embedded/	Coroutines
AOSP Customization	JavaRx
Android SDK	Dagger
AOSP + custom	AIDL
system apps	ExoPlayer
Kotlin	Okhttp3

### Android Development Tools

Android API	Timber
Koin	Mockk
Room	Ably.io
JNI	Azure
Jackson	

# // Our Expertise

## SaaS Platform Development

We focus on building B2B SaaS solutions to fit all modern cloud requirements: multitenancy, security, scalability, and optimal performance.

### Our experience

#### Cybersecurity platforms:

- Extended detection and response (XDR) solutions
- Endpoint Detection and Response (EDR) system
- Data Loss Prevention (DLP) tools
- Security information and event management (SIEM) solutions
- Security orchestration, automation and response (SOAR) platforms
- Insider Risk Management (IRM) software

#### Enterprise solutions:

- ERP platforms
- CRM systems
- HR management solutions
- Payroll processing platforms
- Property management systems
- Content management systems

### Tech highlights

NodeJS	Go
React	.NET and ASP.NET
Python	Database design
C#	Rust
PHP	

### Databases we work with

MS SQL	Elasticsearch
MongoDB	Flask
PostgreSQL	



# // Our Expertise

## Data Development

Our specialists are experienced in many aspects of data management including a broad range of systems, architectures, and performance requirements.

### Our experience

- Advanced file discovery
- Signature-based file classification
- Advance manager for file operations
- Data encryption with application-based on-demand runtime decryption
- File provider
- Virtual File System for data access organization and security
- Virtual Disk
- File/Folder seamless redirection
- Custom Network Data Source
- File containers

### Languages

C/C++  
C#  
Objective-C  
Python

### OS

Windows x86, x64  
Linux  
Mac OS  
Mobile Platforms



# // Our Expertise

## Data Processing Development

We have an extensive data format library for desktop and mobile systems, as well as best practices for data acquisition, processing, transmission and recovery.

### Our experience

- Raw data acquisition: desktop, mobile
- Various database format parsers
- Various mobile format parsers: user data and system data
- Deleted data recovery: desktop, mobile
- The Server Message Block (SMB) protocol parsing for anomaly detection in file operations
- Multithreaded/Improved data transmission technologies
- Real-time media streaming: development, optimization
- File/Disk snapshots: making, transmitting, storing, analysis
- In-built file protection technologies

### Languages

C/C++

C#

Objective-C

### OS

Windows x86, x64

Linux

Mac OS

Android

Mobile Platforms



# // Our Expertise

## Video & Audio Delivery

With the advances of web technology, video and audio capability is challenged to keep up. Our team provides solutions with quality and service continuity guarantees.

### Our experience

- Capturing screen contents as a highly efficient video stream optimized for storage
- Online video player with advanced quality
- Hardware acceleration for video playback (reversing around Android)
- Custom video conferencing software development
- Voice isolation solution
- Cross-platform enabled application to capture screen activity, store, playback, and export
- Peer-to-peer based web application for video, audio and screen transfer (using WebRTC)
- Interactive voice response systems development
- Audio drivers development
- Zoom-like applications development

### Technologies, tools, and frameworks we've used

WHLK/WHQL	Audio Stream
WPF	Input/Output (ASIO)
HTML5 supported web browsers	WiX
	ATL
	ACE

### Languages

C/C++	Java
C#	Kotlin
Objective-C	

### OS

Windows	Mobile Platforms
Linux	Custom OS
Mac OS	

# // Our Expertise

## Security and Penetration Testing

Our team provides independent and unbiased audit and testing of your security posture to detect and eliminate vulnerabilities on every level of your system from kernel to cloud and network.

### Our experience

- Penetration testing
- Security testing
- Software code audit
- Compliance testing
- Reverse engineering
- Incident response testing
- Client-server systems assessment
- External and internal networks security testing
- Kernel and driver level testing
- Observability and disaster recovery solutions review and testing
- Cybersecurity platforms
- Security architecture review
- Security policies and procedures review and audit
- Blockchain audits: smart contracts, crypto wallets, blockchain platforms, network, and other

### Cybersecurity domain

System, Cloud, Network, Malware and Threats Protection, Information Security Encryption, Sensitive Data Protection

### System Penetration Testing domains

Mobile OS - iOS, Android, Client-Server systems, Cloud solutions

Reverse engineering analysis, Data storage analysis, Runtime analysis

### WEB Penetration testing standards

OWASP, OSSTMM, PTES, NIST, PCI DSS, CREST, CIS Benchmark

# // Our Expertise

## Embedded systems solutions

Based on wide experience, our engineers create effective, secure and reliable custom embedded firmware solutions that fit complex technical requirements of top-notch hardware manufacturers and Clients' needs.

### Our experience

- Embedded Linux and Android based software development & integration
- Firmware customization of various electronic devices
- Automotive Cyber Security Solutions
- IoT security solutions
- MbedTLS
- Data exchange between devices
- Microcontroller programming
- Digital signal processing
- HID device programming
- M2M Solutions and Connected Devices
- System-on-chip embedded software
- Storage and Boot Loader device firmware
- Cross-platform software development
- Device Drivers and BSP Development
- RTOS porting, BIOS porting and customization
- Data transfer protocol optimization
- Firmware security vulnerabilities investigation
- Hardware reverse engineering

### OS

Linux  
Android

RT systems

### Languages

C/C++  
Assembler

Python

### Devices

Raspberry Pi  
Microcontrollers  
STM32

AVR8  
HID devices and others

### Architectures

ARM  
Intel  
MIPS

PowerPC  
Renesas V850/RH850  
Infineon Tricore

# Any questions?

Can we discuss **next steps**?







# Thank you!

If you have any questions, please contact us at

 [info@apriorit.com](mailto:info@apriorit.com)

 [www.apriorit.com](http://www.apriorit.com)

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