



Internet Society
Learning



2022 Course Catalog

Learning @ Internet Society

The Internet is for Everyone

This vision drives everything we do. We are a global nonprofit organization empowering people to keep the Internet a force for good: open, globally connected, secure, and trustworthy.

We are the Internet Society.

We believe everyone should be able to benefit from an open and trusted Internet.

Overview

Preparing a new generation to succeed as leaders in Internet technology, policy, and business is one of the Internet Society’s key objectives. To be successful, the next generation of Internet leaders will need a wide range of skills in a variety of disciplines—as well as the ability and experience to work with people at all levels of society.

Learning @ Internet Society is a way to bring people together in support of an open, globally connected, secure, and trustworthy Internet. It is a way to empower people with the knowledge they need to take action. And it is a way to prepare people to become the future leaders the Internet needs. Since its inception in 1992, the Internet Society has been at the forefront of global Internet education, bringing essential information and training to people throughout the world. Training is essential to the Internet Society’s work. Between 2013 and 2020, we trained more than 100,000 learners worldwide. Our capabilities include ICT, Internet development and growth, infrastructure and connectivity, and capacity building.

Learning @ Internet Society cultivates a global community, empowered through learning opportunities. They are committed to knowledge sharing and advocacy that contributes to building, promoting, and defending a bigger and stronger Internet. Our program builds a global community that is informed and passionate about the shaping and development of the Internet.



Highlights

Courses

We offer moderated online courses, face-to-face (when it is safe to do so) courses, and self-paced tutorials for the Internet Society community.

These are available in online and offline mode, and in three languages (English, French, and Spanish). All courses are offered in high-bandwidth and low-bandwidth versions to accommodate network connectivity issues. The low-bandwidth versions adhere to Web Content Accessibility Guidelines (WCAG) 2.1 Level AA and are mobile responsive.

Our courses cover topics important to the Internet industry, particularly for growing and strengthening the Internet. By learning with the Internet Society, participants will be able to:

- Enhance employability, entrepreneurship, and career skills in the Internet industry
- Connect the unconnected
- Champion protocols that keep the Internet secure
- Build, promote, and defend the network of networks

Check out our course calendar and learn when courses will be offered during the year.



	March				April				
	Wk 1	Wk 2	Wk 3	Wk 4	Wk 5	Wk 1	Wk 2	Wk 3	Wk 4
Internet Governance (5 weeks)	1-5	8-12	15-19	22-26	29-2	5-9	12-16	19-23	26-30
MANRS (6 weeks)	Cycle 1								
Encryption (6 weeks)					Cycle 1				Cycle 2
L4M Course									
NetOps 1 (6 weeks)	Cycle 1								Cycle 2
NetOps 2									
Internet Way of Networking (IWN)									
ISP 2.0									
Charter Training (Induction)	Cycle 1						Check-in		
Online Privacy (self-paced tutorial)	Cycle 1								
Digital Footprints (self-paced tutorial)	Cycle 1								
Internet Society Foundation Grant Application and Project Implementation Guidance	Cycle 1								



Learners

Who can take our course?

Everyone. If you would like to learn about the Internet, how it works, and shape its future, our online courses are for you!

Our courses are aimed at people with different experience levels. There are both technical and nontechnical courses in our catalog. Technical courses may have prerequisites—requirements you must meet prior to registration, so please check the prerequisites before registering for a course.

What do you need to take our courses?

To take our courses, learners need:

- Internet connection
- Desktop or laptop with at least 1 gigahertz (GHz) 32-bit (x86), or 64-bit (x64) processor and 1GB or RAM or smartphone with similar characteristics
- A modern web browser (Mozilla Firefox, Google Chrome, Internet Explorer 9 or later, Opera, Apple Safari, etc.) running an operating system supported by VirtualBox (Windows, Ubuntu, Mac OS X, etc.)
- JavaScript and cookies enabled



Tutors

Our tutors are world-class experts who support course delivery by leading live sessions, responding to learner questions on the course forum, and sharing their expertise with the community. They have solid backgrounds and deep knowledge about the Internet. Our tutors possess vast expertise, hold relevant academic qualifications, and complete an annual training session to prepare them to be an official Internet Society tutor.

“It was an excellent experience on learning and implementing DNS. Internet Society Network Operations course was very helpful for me, especially [as] it brought an opportunity to uplift my professional career [and earn] a new job.”

—Deepthi Gunasekara, NetOps Course Learner 2020

Course Catalog

Moderated (Instructor-Led) Courses:

Designing & Deploying Computer Networks.....	7
Encryption.....	8
Internet Governance	9
Internet Way of Networking.....	10
MANRS.....	11
Introduction to Network Operations.....	12
Advanced Network Operations 2.0.....	13

Self-Paces Courses:

Internet Society Chapter Management Essentials.....	14
Digital Footprints.....	15
Internet Exchange Points (IXP) 2.0.....	16
Internet Society Foundation Grant Application and Project Implementation Guidance.....	17
Privacy.....	18

Designing & Deploying Computer Networks

■ Course is available in English, French, and Spanish.

What is this course?

This course is for students with a basic understanding of computer hardware and software, and who are already familiar with personal computers. It begins with teaching the fundamentals of networking, Ethernet, as well as Wi-Fi technologies. From the fundamentals, the course moves into the planning, design, and deployment of simple LANs and covers the most common ways to connect a LAN to the Internet (Mobile Internet, ADSL, Fiber) and how to set up the connections. In addition, the course will present the most common maintenance issues as well as how to solve those issues. The course will have theoretical and practical components. **The course will not include the planning, design and deploying of LANs that require other advanced equipment or concepts.**



What are the course objectives?

- Understand what a network is and how it works
- Have basic knowledge of OSI model, Network Standard organizations and TCP/IP Protocol suites
- Understand Types of Network Media
- Have basic knowledge of the components that make up a network and differentiate between a LAN, MAN and WAN
- Know the most common components and technologies of LAN (Network devices, Cable, and Wireless)
- Design and install small LAN infrastructure
- Connect the LAN to the Internet using the most common Internet services through mobile, ADSL, and Fiber
- Troubleshoot small LANs and Internet connections and resolve the problems
- Have a basic understanding of how the Internet works (routing, DNS)

Who should attend this course?

You should take this course if:

- You are interested in planning, designing and deploying an Ethernet wired network using switches and/or UTP cables
- You want to be able to design and deploy a Wi-Fi network using a Wi-Fi router
- You would like to be able to configure routers to Connect LANs to an ISP
- You want to gain knowledge in troubleshooting LANs

Prerequisites:

- Basic understanding of computer hardware and software
- Familiarity with personal computers and at least one operating system and basic office software

Encryption

■ Course is available in English, French, and Spanish.

What is this course?

This course is an introduction to encryption, and is intended to serve both as an overview and as a level set and foundation. Encryption is a key element in protecting us and our information as we go about our daily lives and as we interact with others online. It ensures our information and our communications remain confidential, protected, and available only to those for whom we intend.

What are the course objectives?

- Describe encryption concepts at a high level, and the benefits encryption offers to us individually and as a society
- Find out why it is important, and the ways in which we rely upon strong encryption in our daily lives
- Understand how and why efforts to weaken encryption pose a serious threat
- Learn about various “backdoor access” proposals and why they are problematic
- Learn about the Internet Society’s goals and activities related to supporting strong encryption and defending against threats to it
- Discover what actions you can take to advocate for strong encryption in your community and beyond

Who should attend this course?

This course does not have prerequisites.

You should take this course if:

- You would like to have a solid understanding of how encryption relates to you as an Internet user and what threats it may face from governments, industry, and criminals
- You would like to be able to advocate for strong encryption
- You would like to become an encryption supporter and activate a Chapter.
- You want to build awareness of the importance and benefits of encryption
- You want to help shape the encryption process to protect data on the Internet
- You would like to learn why encryption is fundamental for a secure, trusted and more resilient Internet



Internet Governance

Course is available in English, French, Spanish, and Arabic.



What is this course?

How the Internet is governed is critical, and how we manage this precious global resource impacts our economic and social opportunities far into the future. Internet governance is the development and application by governments, the private sector, and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programs that shape the evolution and use of the Internet.

This course provides an overview of Internet governance, touching on key areas such as its history, policy principles, actors and stakeholders, infrastructure, regulatory frameworks, multilingualism, and cybersecurity. The course also discusses and analyzes the multistakeholder model, examines the developmental aspects of Internet governance, and looks at the collaborative nature of achieving Internet security and resilience.

What are the course objectives?

- Provide an overview of Internet governance and learn about the history of the Internet
- Understand the Internet ecosystem and discuss the multistakeholder model
- Learn about the various Internet actors and stakeholders involved in the development of the Internet and its governance
- Provide a brief background on the Internet infrastructure, standards, protocols, and systems as a basis to understand Internet governance and cover the main Internet infrastructure and principles on which the Internet operates
- Understand the main foundations of Internet law and challenges in implementation and enforcement. We will also take a look into the importance of regulation on a national level to ensure a competitive, open, and accessible Internet environment
- Learn about the different elements of cybersecurity, from both a policy and a technical perspective. Explore types of threats, national cybersecurity frameworks, and the role of various international organizations

Who should attend this course?

This course does not have prerequisites.

You should take this course if:

- You want to understand how the Internet is governed and learn about the history of the Internet
- You would like to learn about Internet actors and stakeholders' groups
- You would like to understand Internet policy principles, regulatory frameworks and Internet infrastructure, standards, protocols, and systems
- You want to help to shape the future of the Internet

Internet Way of Networking

■ Course is available in English, French, and Spanish.

What is this course?

This course is an introduction to the critical properties of the Internet Way of Networking. It will help learners understand the foundation that underpins the health and success of the Internet, and how to protect it to ensure the Internet can evolve to reach its full potential.

What are the course objectives?

- Discover what key technologies and actions helped spark the Internet
- Learn what the Internet Way of Networking is and the five critical properties that make up the foundation that underpins the Internet
- Find out how to identify threats to the Internet Way of Networking, with examples from existing use cases
- Learn how conducting an Internet impact assessment can help prevent policies, technologies and trends from harming the Internet
- Learn about the Internet Impact Assessment Toolkit, and how it can help users protect the foundation that keeps the Internet working for everyone

Who should attend this course?

This course does not have prerequisites; it is recommended (but not required) for Network Operations.

You should take this course if:

- You are a policymaker, technologist, or advocate working on issues related to Internet regulation
- You have a base understanding of how the Internet works, and would like to learn about the critical foundation that keeps it working for everyone
- You want to build awareness of the importance of protecting the critical foundation of the Internet
- You want to be able to advocate to prevent a policy, technology, or trend from harming the Internet's foundation
- You want to know the basic considerations to include in an Internet impact assessment



MANRS

■ Course is available in English, French, and Spanish.

What is this course?

The Mutually Agreed Norms for Routing Security (MANRS) is a global initiative, supported by the Internet Society, to work with operators, enterprises, and policymakers to implement crucial fixes needed to reduce the most common routing threats.

MANRS comprises four simple but concrete steps that will dramatically improve Internet security and reliability. The first two operational improvements eliminate common routing issues and attacks, while the second two procedural steps provide a bridge to universal adoption and decrease the likelihood of future incidents.

This course gives you an understanding of how critical is to ensure that Internet traffic is reliably routed around the world to build a trustworthy, global Internet. Based on common network operational practices in place today, the global Internet routing system does not have sufficient security controls to prevent the injection of false routing information, including impersonation of networks.

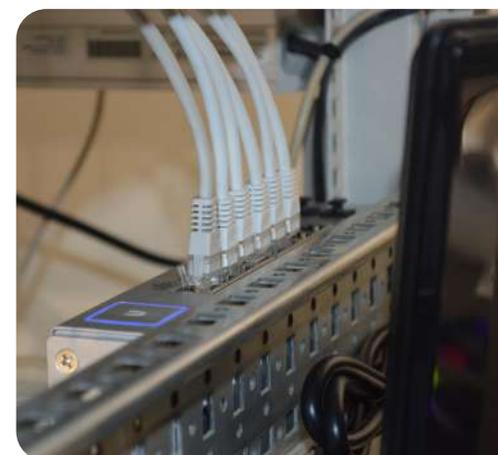
What are the course objectives?

- Find out what MANRS is and why should you join this initiative
- Learn the four actions all network operators should implement to improve both the Internet's routing security and their own network's operational efficiency
- Understand the importance of routing security to the future and stability of the Internet
- Learn how to prevent routing outages or attacks – such as hijacking, leaks, and spoofing – that can lead to stolen data, lost revenue, reputational damage, and more, all on a global scale
- Understand the databases and repositories MANRS participants should use to document routing policy and maintain contact information
- Apply anti-spoofing measures within your network and identify points/devices in the network topology where anti-spoofing measures should be applied. Identify adequate techniques to be used (for example, uRPF, or ACL filtering), configure your devices to prevent IP spoofing, and then verify that the protection works

Who should attend this course?

This course does not have prerequisites.

You should take this course if you're a network administrator/engineer with knowledge and experience of networking and peering and are also familiar with Autonomous System Numbers (ASNs).



Introduction to Network Operations

■ Course is available in English, French, and Spanish

What is this course?

This is an introductory course targeted at novice/entry level UNIX/Linux users pursuing careers in Network or System Administration. This course provides the necessary skills to progress to more advanced topics in the future. This course is practically oriented and provides step-by-step guidance on how to configure a UNIX/Linux server and then run a Caching Domain Name System (DNS) server in a virtualized environment. The techniques covered in the course are applicable in real-world environments to set up Internet-ready caching DNS servers.

What are the course objectives?

- Learn about and operate a UNIX/Linux operating system in a virtualized environment
- Develop competences in key networking topics: IPv4 and IPv6
- Install third-party software on a UNIX or Linux platform using common software management tools
- Work with the UNIX/Linux shell and become comfortable with the command line interface
- Edit files in UNIX/Linux environments without Graphical User Interfaces (GUI)
- Understand the role of the Domain Name System (DNS) in the operation of the Internet
- Build and activate a caching Domain Name System (DNS) server
- Learn about the Internet Engineering Task Force (IETF) and the Request for Comments (RFC) process

Who should attend this course?

This course does not have prerequisites.

You should take this course if:

- You are a novice/entry-level network engineer or system administrator interested in learning about UNIX/Linux, networking, and DNS
- You are an upcoming network engineer or system administrator from a Research Education Network (REN), Network Operator Group (NOG), university, ccTLD registry, or Internet Service Provider (ISP)



Advanced Network Operations 2.0

■ Course is available in English, French, and Spanish.

What is this course?

This follows on from the Introduction to Network Operations course and aims to build on participants' knowledge of more advanced aspects of core Internet services and new technologies. Topics include advanced DNS and introductions to email, secure web, and network monitoring.

What are the course objectives?

- Understand advanced DNS setups, in order to deploy an authoritative DNS server
- Learn more about the workings of Email and Web services, including how to set up a basic email server and a basic web server with TLS-secured pages
- Understand network monitoring and its importance to network operations, in order to configure a network monitoring service to monitor various network devices and Internet services

Who should attend this course?

You should take this course if:

- You are an intermediate-to-expert-level engineer interested in learning about deploying core Internet services, using open source software and open standards
- You have already attended the NetOps 1.0 course

Prerequisites:

- This course requires you to have first taken either the Introduction to Network Operations or NetOps 1.0 course
- You need to have a firm understanding of Unix/Linux and basic DNS, as well as caching/resolving DNS servers, networking, and command line Unix

Internet Society Chapter Management Essentials

■ Course is available in English, French, and Spanish.

What is this course?

This course helps you learn what it takes to successfully run an Internet Society chapter. It includes tips on how to engage local communities to achieve our collective vision. It also covers topics such as fundraising, growing membership, developing activities, and communicating effectively.

What are the course objectives?

- Learn how to successfully lead a chapter
- Find out how to find funding to create and implement a chapter
- Learn how to grow the membership of a chapter
- Discover how to develop activities, programs, and events for a chapter

Who should attend this course?

You should take this course if:

This course does not have prerequisites.

Prerequisites:

- You are a new Internet Society chapter leader or if you consider becoming one to help us create an open, globally connected, secure, and trustworthy Internet for everyone
- You have already been a chapter leader for a while and would like a refresher on some of the chapter management fundamentals, as well as some of the chapter-related standards, policies, and requirements of the Internet Society
- You want to contribute to the development of the Internet in your country and region by engaging the local community around Internet-related topics at the intersection of technology, policy, and development, and by raising awareness about Internet-related issues



Digital Footprints

■ Course is available in English, French, and Spanish.

What is this course?

Every day, whether we want to or not, most of us contribute to a growing portrait of who we are online – a portrait that is probably more public than we assume.

This portrait helps companies target content at specific markets and consumers, helps employers look into your background, and helps advertisers track your movements across multiple websites. Whatever you do online, you might be leaving digital footprints behind.

This course gives you an understanding of the different trails you are leaving on the Internet and how this might affect you. While it is not possible to have zero digital footprints, the first steps toward reducing your digital footprint and managing your digital identity are simple.

What are the course objectives?

- Understand what a digital footprint is and its benefits and costs
- Understand how everyday Internet users can build up a substantial digital footprint
- Understand the economics of the digital footprint of Internet users
- Learn if the loss of privacy on the Internet is considered an issue
- Understand the differences in digital footprints made by different devices
- Learn how to manage your digital footprint in your online routine
- Learn who tracks you around the Internet and how do they do it
- Gain an overview of the nuances of what a digital footprint can mean in different parts of the world
- Learn how privacy laws in different parts of the world can impact your digital footprint

Who should attend this course?

You should take this course if:

This course does not have prerequisites.

Prerequisites:

- You want to understand what a digital footprint is
- You would like to understand the implications and effects of your digital footprint
- You want to reduce your digital footprint and manage your digital identity on the Internet



Internet Society Foundation Grant Application and Project Implementation Guidance

■ Course is available in English, French, and Spanish.

What is this course?

This course is designed for those interested in applying for grants through the Internet Society Foundation. You will learn how to design an impactful grant application that incorporates Monitoring, Evaluation, and Learning (MEL) principles, and will gain insight into how a grant project can positively change lives through an open, globally connected, secure and trustworthy Internet for all.

What are the course objectives?

- Learn how to design a grant application that considers the changes envisioned and measures progress over time
- Consider the details and impact of a Grant Project Proposal
- Understand the importance of Monitoring, Evaluation, and Learning when designing your Grant Project
- Learn about best practices to strengthen a Grant Project proposal

Who should attend this course?

This course does not have prerequisites.

You should take this course if:

- You would like to design a Grant Project
- You would like to learn how to implement a Grant Project (Monitoring, Evaluation, Learning and reporting processes)
- You would like to design measurement and costs of a Grant Project, that is, develop Key Performance Indicators and budgets



Internet Exchange Point (IXP) 2.0

■ Course is available in English, French, and Spanish.

What is this course?

This course will provide participants with an understanding of the key aspects of operating an Internet exchange point (IXP). We will cover the following areas: 1) basics and introduction of IXP operations, 2) business and strategic aspects, 3) governance, policy, and regulatory and technical aspects.

What are the course objectives?

- Gain a comprehensive understanding of how to establish and manage an IXP and the key building blocks that constitute a dynamic peering and interconnection ecosystem
- Develop a good understanding of what is required to build and scale an IXP, the different governance and operating models, and the key technical aspects of running a resilient and secure platform
- Understand the different IXP business models and how to build a growth strategy plan to take a new or existing IXP from its current development stage to the advanced stage

Who should attend this course?

You should take this course if:

- Individuals and/or an association of community players working on the establishment of an IXP
- Volunteers, staff, or employees of a nascent or developing IXP looking to learn how to scale its growth
- Peering and interconnection ecosystem stakeholders such as Internet service providers (ISPs), policy makers and regulators

Prerequisites:

- You must have a basic understanding of how the Internet works and a good understanding of or practical experience in networking using dynamic routing protocols
- Prior knowledge and/or experience with UNIX/Linux systems will be useful for the technical modules

Privacy

■ Course is available in English, French, and Spanish.

What is this course?

Privacy is an important right and an essential enabler of an individual's autonomy, dignity, and freedom of expression. Yet there is no universally agreed definition of privacy. In the online context, however, a common understanding of privacy is the right to determine when, how, and to what extent personal data can be shared with others.

This course gives you an understanding of how, in today's digital age, information gathering is fast, easy, and less expensive than ever. Progress on a variety of technological fronts has contributed to this new world.

Personal data has become a profitable commodity. Every day, users share more personal data online, often unknowingly. The Internet of Things will increase this dramatically. These factors have the potential to expose personal data and create privacy challenges on a greater scale than ever before.

This course provides a solid foundation for encouraging the development and application of privacy frameworks that apply an ethical approach to data collection and handling. These are frameworks that incorporate, among other things, the concepts of fairness, transparency, participation, accountability, and legitimacy.



What are the course objectives?

- Learn the definition and importance of privacy
- Understand and reinforce user trust of online services, even as online privacy is under constant pressure of being undermined
- Learn how to promote strong, technology-neutral data-privacy laws, privacy-by-design principles, and ethical data-collection and handling principles on the Internet
- Discover how to protect and foster online privacy

Who should attend this course?

This course does not have prerequisites.

Prerequisites:

- You would like to understand what privacy is and its importance
- You want to contribute to the growth and application of privacy frameworks that apply an ethical approach to data collection and handling

Contact Us

For more information, please visit the Internet Society website at
<https://www.internetsociety.org/>

Follow the Internet Society on Twitter:
<https://twitter.com/internetsociety>

For more information about our training courses, please visit
<https://www.internetsociety.org/learning>

To get in touch with us, kindly contact us on
learning@internetsociety.org