

Python for Security Professionals

Session 1: An Overview of Python

- What is python?
- An overview of Python
- What is python?
- Python Timeline
- Advantages/Disadvantages of Python
- Getting help with pydoc

Session 2: The Python Environment

- Starting Python
- Using the interpreter
- Running a Python script
- Python scripts on Unix/Windows
- Editors and IDEs

Session 3: Getting Started

- Using variables
- Built-in functions
- Strings
- Numbers
- Converting among types
- Writing to the screen
- Command line parameters

Session 4: Flow Control

- About flow control
- White space
- Conditional expressions
- Relational and Boolean operators
- While loops
- Alternate loop exits

Session 5: Sequences

- About sequences
- Lists and list methods
- Tuples
- Indexing and slicing
- Iterating through a sequence
- Sequence functions, keywords, and operators
- List comprehensions
- Generator Expressions
- Nested sequences

Session 6: Working with files

- File overview
- Opening a text file
- Reading a text file
- Writing to a text file
- Reading and writing raw (binary) data
- Converting binary data with struct

Session 7: Dictionaries and Sets

- About dictionaries
- Creating dictionaries
- Iterating through a dictionary
- About sets
- Creating sets
- Working with sets

Session 8: Functions

- Defining functions
- Parameters
- Global and local scope
- Nested functions
- Returning values

Session 9: Sorting

- The sorted () function

- Alternate keys
- Lambda functions
- Sorting collections

Session 10: Errors and Exception Handling

- Syntax errors
- Exceptions
- Using try/catch/else/finally
- Handling multiple exceptions
- Ignoring exceptions

Session 11: Modules and Packages

- The import statements
- Module search path
- Creating modules and Using packages
- Function and Module aliases

Session 12: Classes

- About o-o programming
- Defining classes
- Constructors
- Methods
- Instance data
- Properties
- Class methods and data

Session 13: Regular Expressions

- RE syntax overview
- RE Objects
- Searching and matching
- Compilation flags
- Groups and special groups
- Replacing text
- Splitting strings