

## Introduction

Ruler is a tool that allows you to interact with Exchange servers remotely, through either the MAPI/HTTP or RPC/HTTP protocol. The main aim is abuse the client-side Outlook features and gain a shell remotely.

The full low-down on how Ruler was implemented and some background regarding MAPI can be found in our blog posts:

- Ruler release
- Pass the Hash with Ruler
- Outlook forms and shells
- Outlook Home Page Another Ruler Vector

For a demo of it in action: Ruler on YouTube

### What does it do?

Ruler has multiple functions and more are planned. These include

- Enumerate valid users
- Create new malicious mail rules
- Dump the Global Address List (GAL)
- VBScript execution through forms
- VBScript execution through the Outlook Home Page

Ruler attempts to be semi-smart when it comes to interacting with Exchange and uses the Autodiscover service (just as your Outlook client would) to discover the relevant information.

#### Languages

Go 99.8%Makefile 0.2%

## **Getting Started**

Compiled binaries for Linux, OSX and Windows are available. Find these in <u>Releases</u> information about setting up Ruler from source is found in the <u>getting-started</u> guide.

## Usage

Ruler has multiple functions, these have their own documentation that can be found in the wiki:

- BruteForce -- discover valid user accounts
- Rules -- perform the traditional, rule based attack
- Forms -- execute VBScript through forms
- Homepage -- use the Outlook 'home page' for shell and persistence
- GAL -- grab the Global Address List

# **Attacking Exchange**

The library included with Ruler allows for the creation of custom message using MAPI. This along with the Exchange documentation is a great starting point for new research. For an example of using this library in another project, see SensePost Liniaal.

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