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OpenOTP™
RADIUS Bridge

INTEGRATE A LARGE VARIETY OF THIRD-PARTY PRODUCTS AND SYSTEMS WITH MULTI-FACTOR AUTHENTICATION

- **What is RADIUS Bridge?**

- **What does it support?**

OpenOTP RADIUS Bridge provides the RADIUS RFC-2865 (Remote Authentication Dial-in User Service) API for your OpenOTP server. With RADIUS Bridge you can integrate a large variety of third-party products and systems with multi-factor authentication. Many Enterprise products and services like Microsoft reverse-proxies, VPNs, Citrix or even VMWare support RADIUS for a more flexible user authentication.

RADIUS Bridge supports several ways the user can provide the credentials for multi-factor authentication. For example, password and OTP can be provided concatenated or asked one by one using RADIUS challenge. With OpenOTP client policies, you can define single or multi-factor authentication, based on flexible criteria, such as IP, geolocation, time, etc.

RADIUS Bridge supports X.509 certificate-based authentication for network access control for **Wi-Fi and LAN networks** using 802.1X and OCSP for certificate revocation.

MAIN KEY FEATURES RADIUS integrations support all OpenOTP features

- ✓ 100% compatible with RADIUS standard (RFC-2865)
- ✓ Robust implementation built with FreeRadius
- ✓ OTP with challenge-response or password concatenation
- ✓ Supports any RADIUS vendor dictionary
- ✓ Supports MS Domain-style login names (i.e. Domain\Username)
- ✓ Supports MS User Principal Names
- ✓ Supports OpenOTP contextual authentication
- ✓ Per-user and group reply attributes for VPNs (ACL, roles)

- ✓ Authentication policies per client application or group of users
- ✓ OCSP support for certificate revocation
- ✓ Standalone service with no additional OpenOTP configuration required
- ✓ High performances with hundreds of requests per second
- ✓ Cluster support with multiple bridges for HA
- ✓ Wi-Fi and LAN networks access control
- ✓ Bridges all the OpenOTP functionalities (OTP-Tokens, Yubikey, SMSOTP, MailOTP...)

RADIUS **INTEGRATIONS**

RADIUS Bridge provides the RADIUS interface on top of OpenOTP server. And it is included in your OpenOTP license at no extra charge.
The RADIUS standard is supported by all major security products on the market. You can also implement OpenOTP authentication methods for:
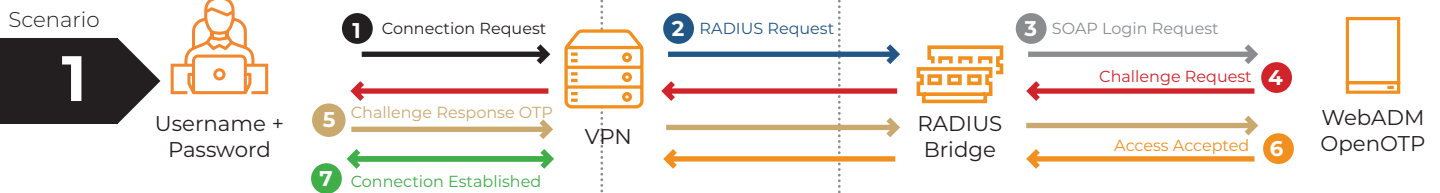
- ✓ VPN Servers (Checkpoint, Cisco, Nortel, F5, Fortigate, Palo Alto...)
- ✓ Microsoft DirectAccess VPN
- ✓ Citrix (Access Gateway, XenApp, Netscaler)
- ✓ VMWare View

- ✓ Microsoft Reverse-Proxies (TMG, UAG, 2012 server...)
- ✓ Enterprise Wifi (Cisco EAP-GTC, EAP-TLS and EAP-TTLS)
- ✓ Radius-enabled Linux services (OpenVPN, Apache...)
- ✓ And many others...

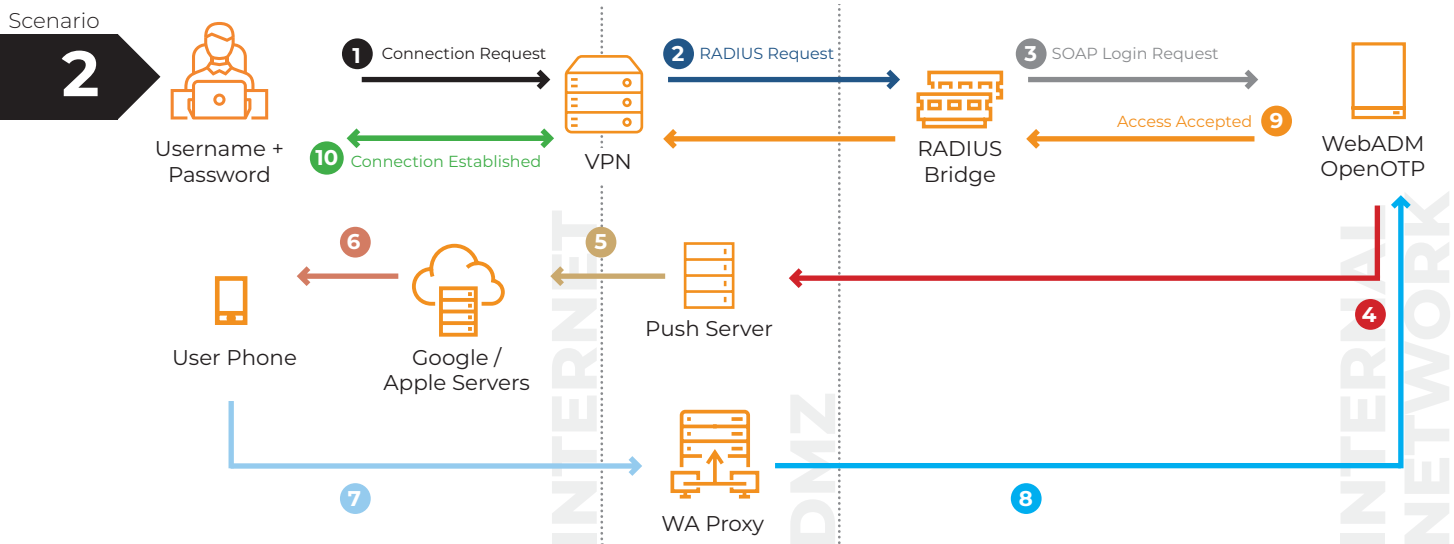■ VPN Authentication with OpenOTP and Radius Bridge

ARCHITECTURE **DIAGRAMS**

See below the OpenOTP RADIUS architecture diagrams. Scenario one shows a typical OpenOTP integration with an enterprise VPN server. Scenario two includes the WAProxy mobile-to-server communication component which is necessary to enable OpenOTP One-Tap login with Approve/ Deny:

VPN authentication with OpenOTP, **Radius Bridge and OTP Challenge**

Scenario **1**

Username + Password

1 Connection Request
2 RADIUS Request
3 SOAP Login Request
4 Challenge Request
5 Challenge Response OTP
6 Access Accepted
7 Connection Established

VPN — RADIUS Bridge — WebADM OpenOTP

VPN authentication with OpenOTP, **Radius Bridge, WAProxy and Push Token**

Scenario **2**

Username + Password

1 Connection Request
2 RADIUS Request
3 SOAP Login Request
9 Access Accepted
10 Connection Established

VPN — RADIUS Bridge — WebADM OpenOTP

6 User Phone
Google / Apple Servers
5 Push Server
4
7
8
WA Proxy

INTERNET — DMZ — INTERNAL NETWORK