



Hashing











$n \parallel H(n)$



## Apache HTTP Server 2.4.23 (httpd): 2.4.23 is the latest available version

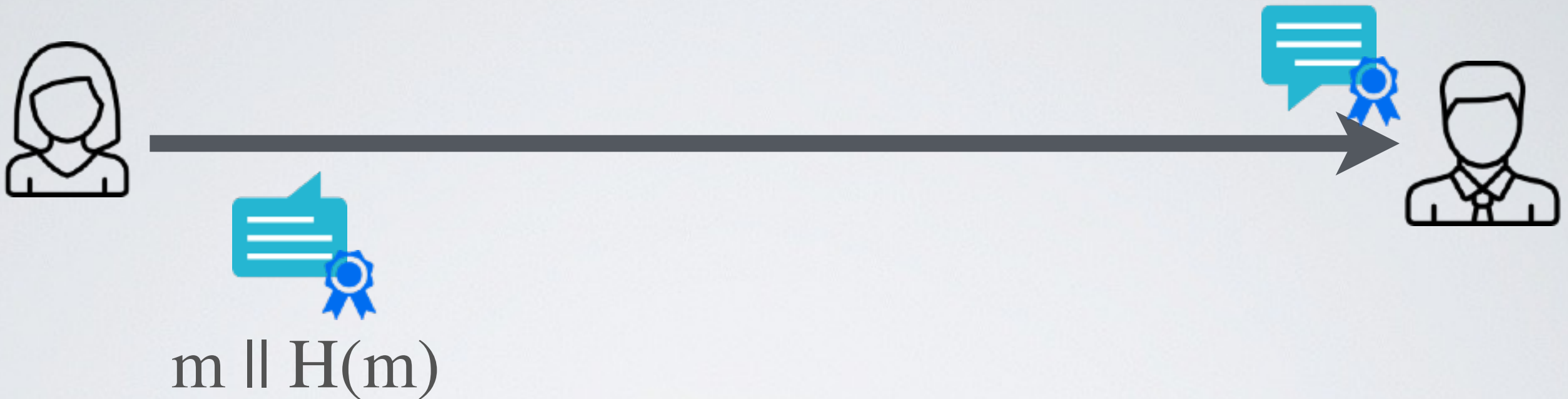
The Apache HTTP Server Project is pleased to [announce](#) the release of version 2.4.23 of the Apache HTTP Server ("Apache" and "httpd"). This version of Apache is our latest GA release of the new generation 2.4.x branch of Apache HTTPD and represents fifteen years of innovation by the project, and is recommended over all previous releases!

For details see the [Official Announcement](#) and the [CHANGES\\_2.4](#) and [CHANGES\\_2.4.23](#) lists

- Source: [httpd-2.4.23.tar.bz2](http://httpd.apache.org/dist/httpd/httpd-2.4.23.tar.bz2) [ [PGP](#) ] [ [MD5](#) ] [ [SHA1](#) ]
- Source: [httpd-2.4.23.tar.gz](http://httpd.apache.org/dist/httpd/httpd-2.4.23.tar.gz) [ [PGP](#) ] [ [MD5](#) ] [ [SHA1](#) ]



# Hashing



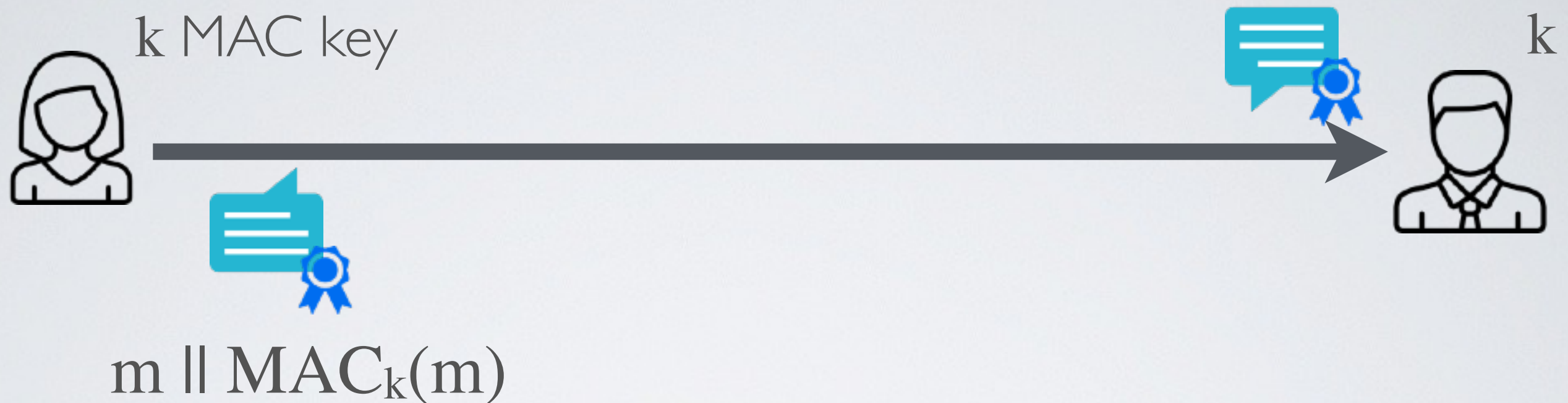
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# MAC - Message Authentication Code



Alice and Bob share a key  $k$

➡ HMAC - use a hash function on the message and the key

$$\text{MAC}_k(m) = H(k \parallel m)$$