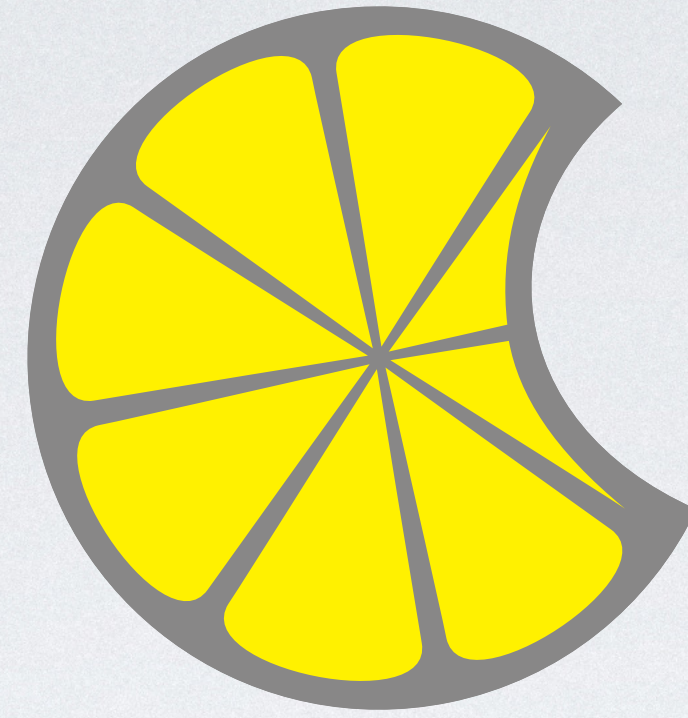




Email

Wie funktioniert das eigentlich?



MacLemon

@MacLemon@chaos.social

<https://maclemon.at/>

Eine kleine Geschichte

der Emails

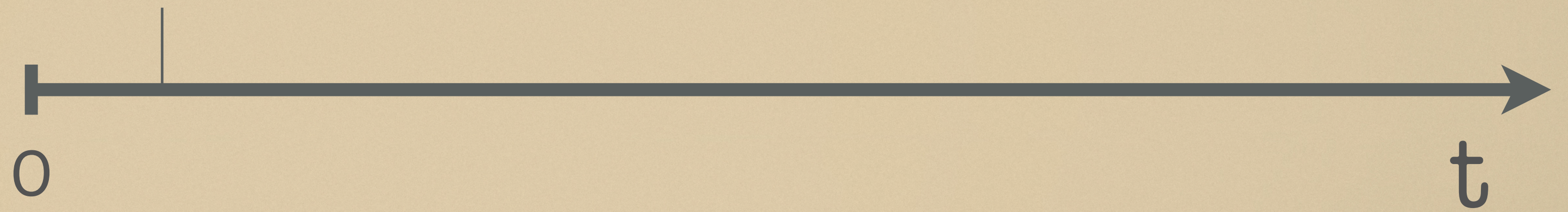
Die frühen 60er

ca. 1969

1970



1971





1971

ray@TENEXA



Mail Header

1973 - RFC561



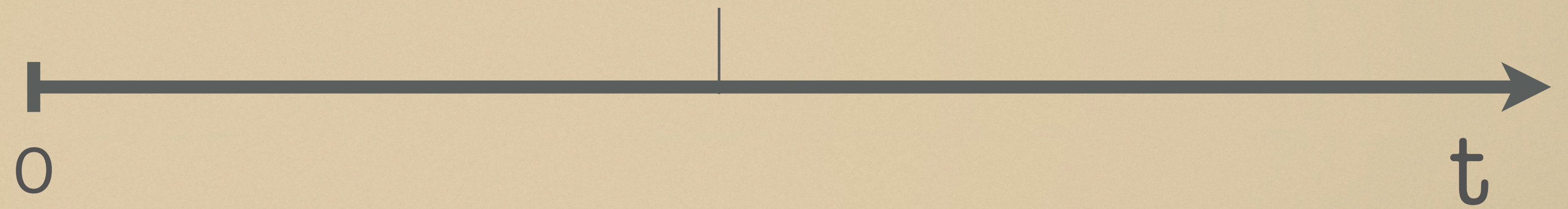
Message Transmission Protocol

1975 - RFC680



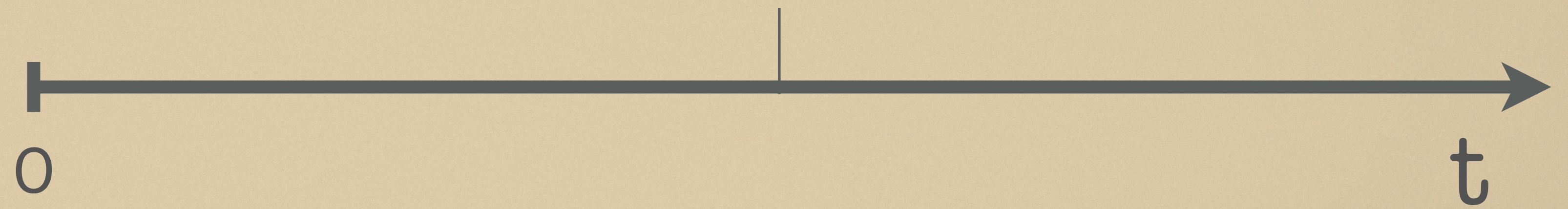
STANDARD FOR THE FORMAT OF ARPA NETWORK TEXT MESSAGES (1)

1977 - RFC733

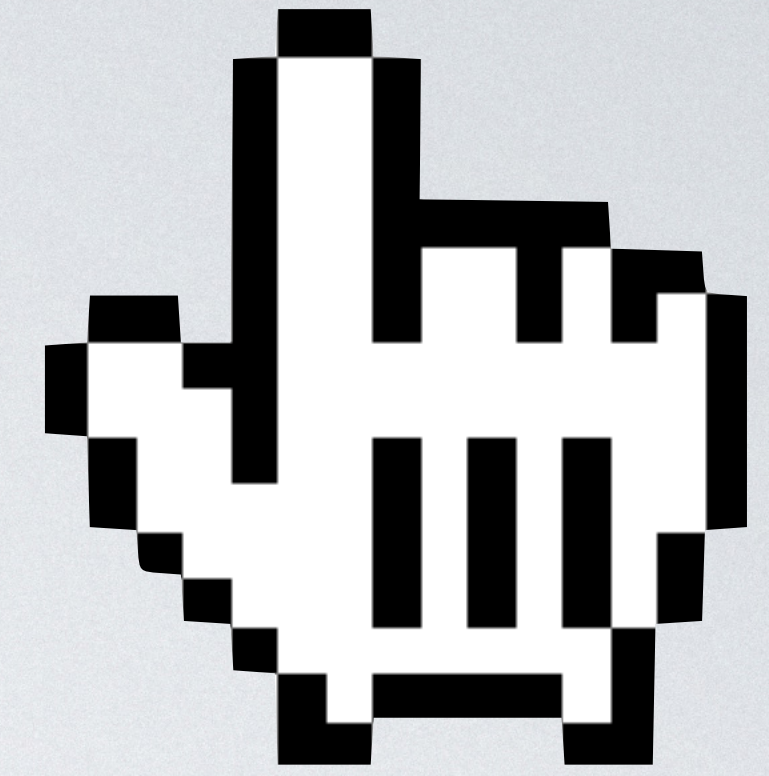


Yay, Email*

*) Für gewisse Definitionen von Email



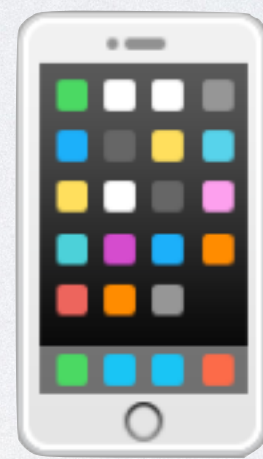
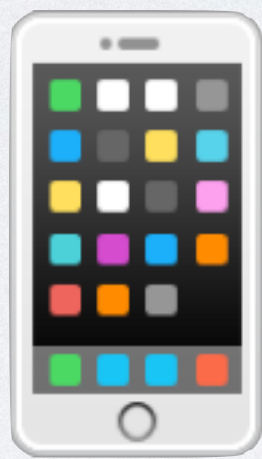
1982
SMTP
RFC821

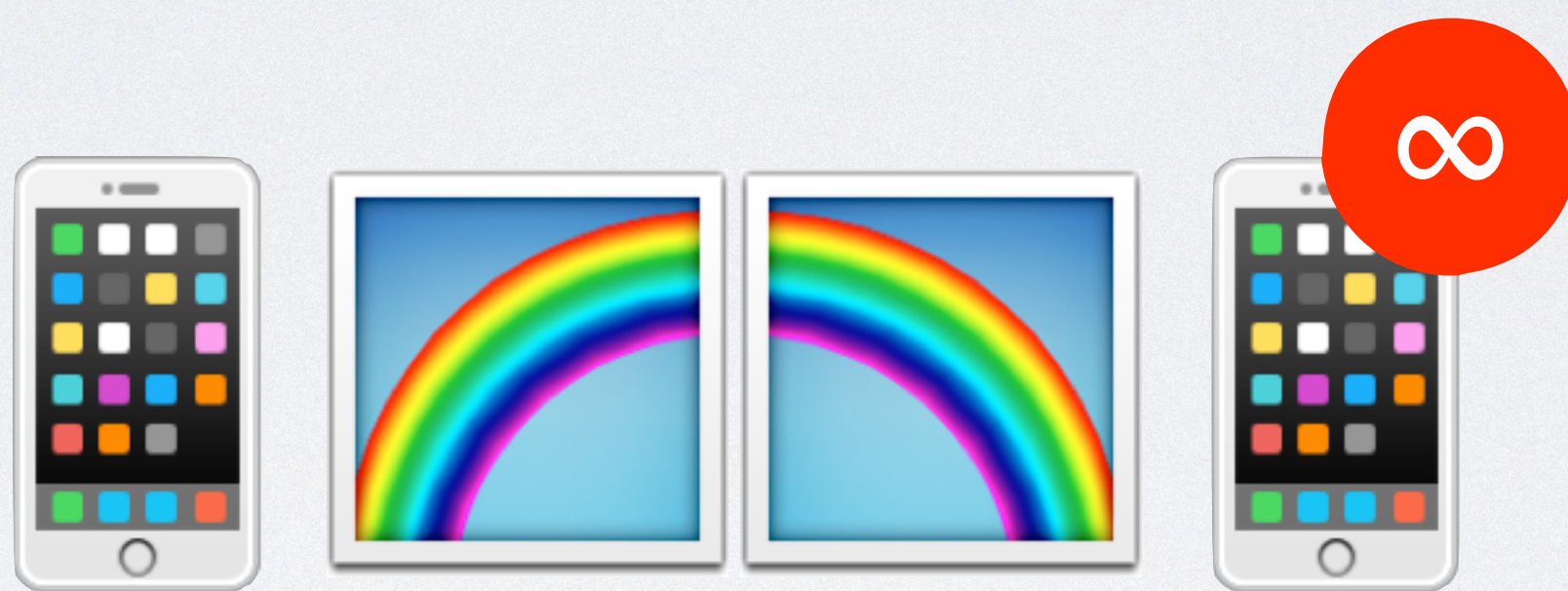


Verwendet das noch wer?

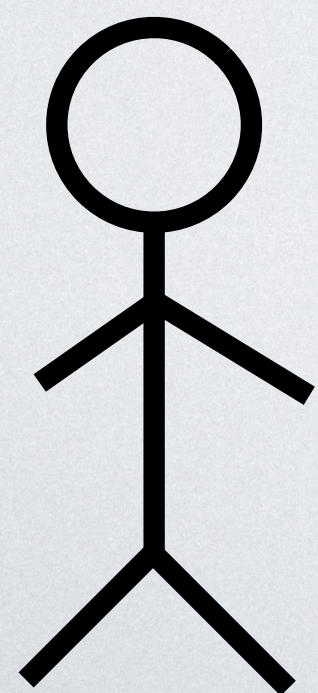
Wie funktioniert Email heute?

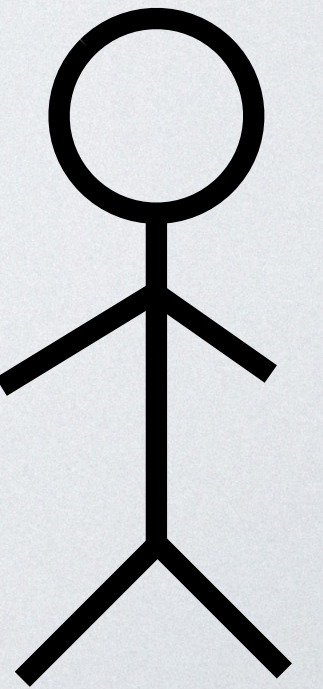
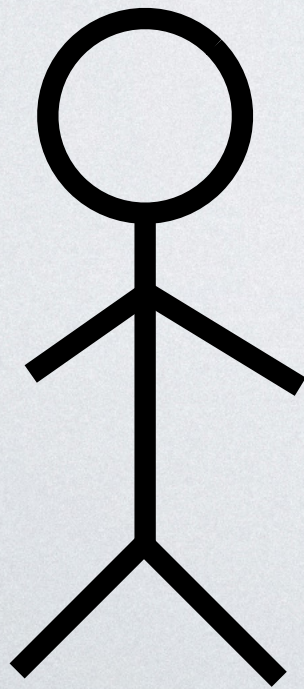
ca. 2018

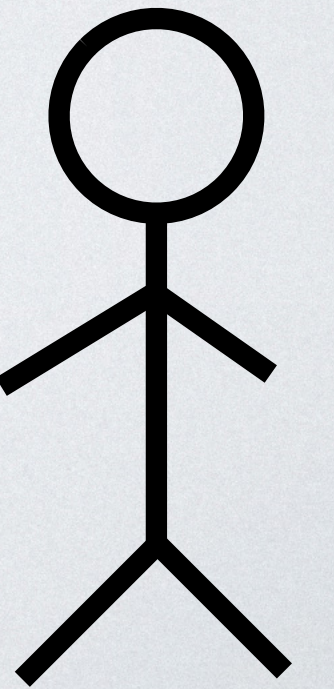
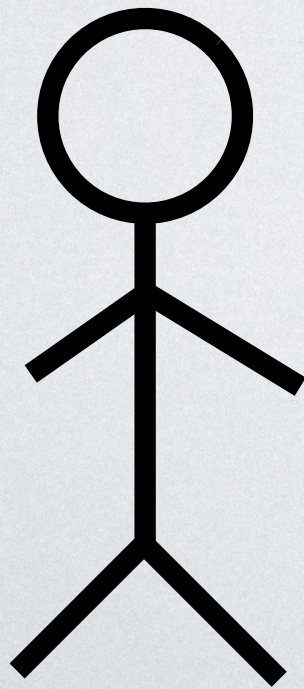




Terminologie

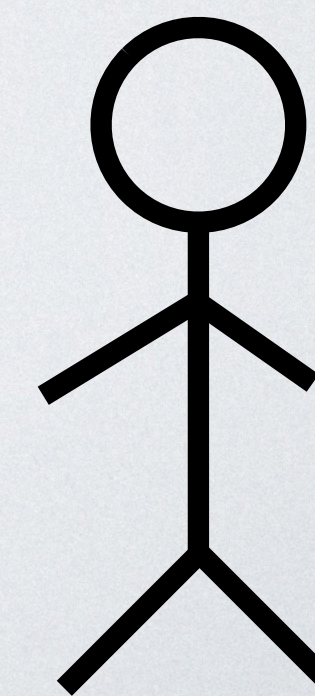
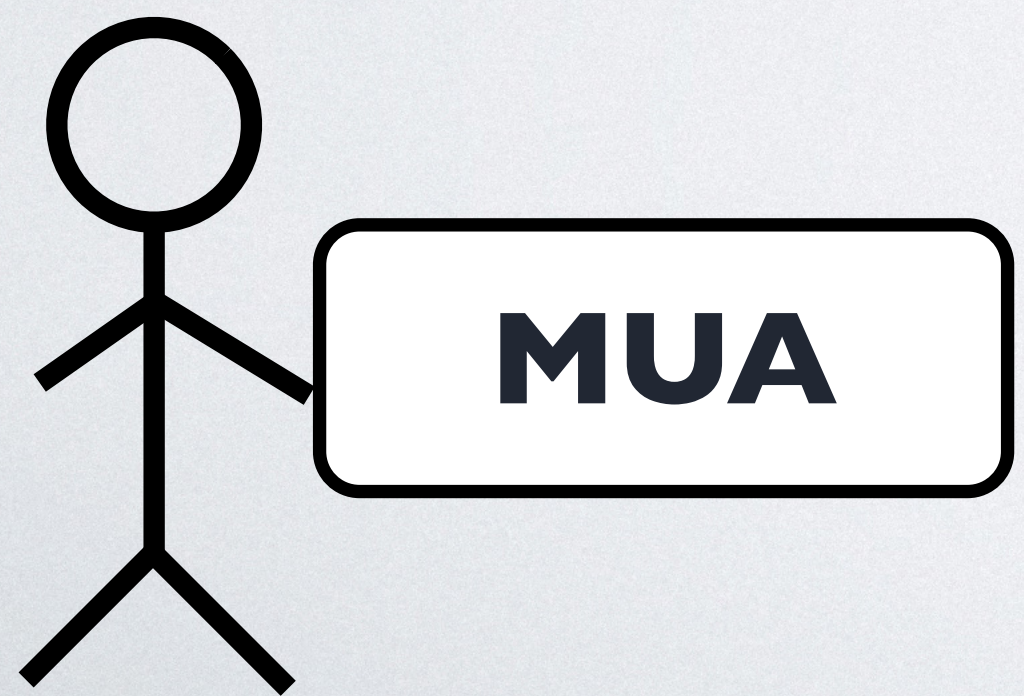






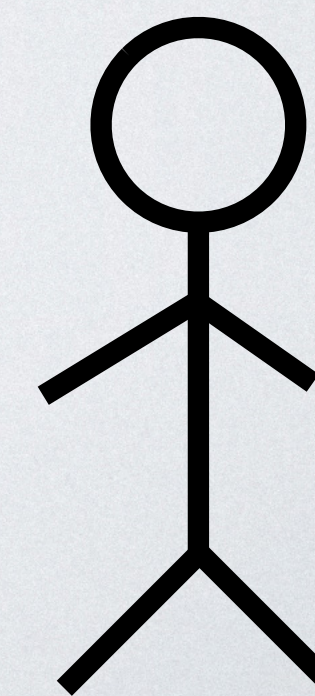
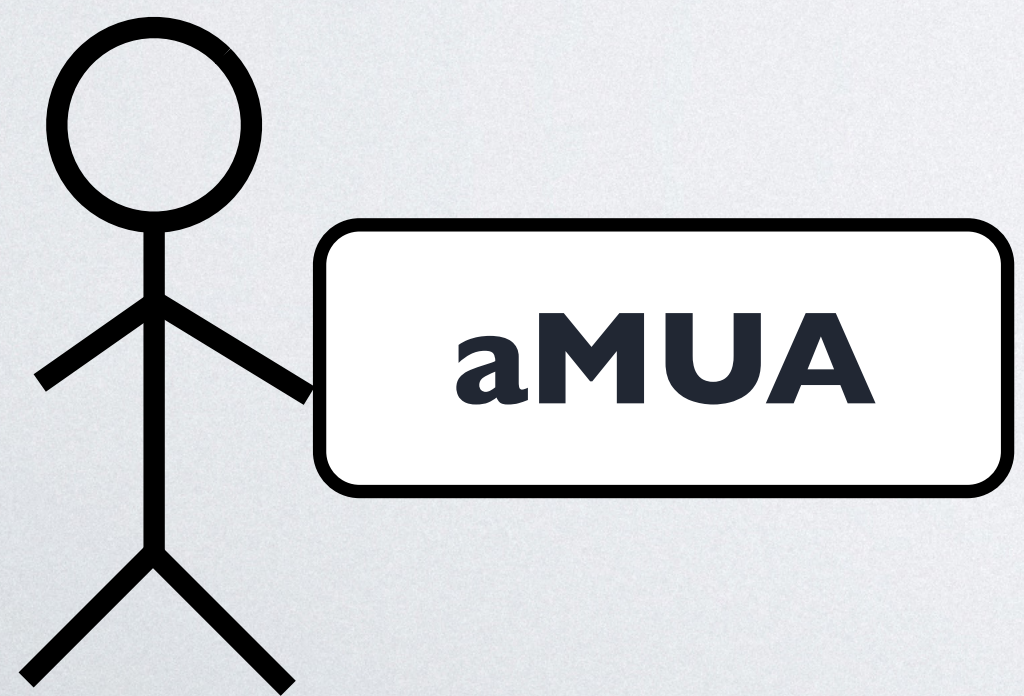
Mail **U**ser **A**gent

Mailprogramm



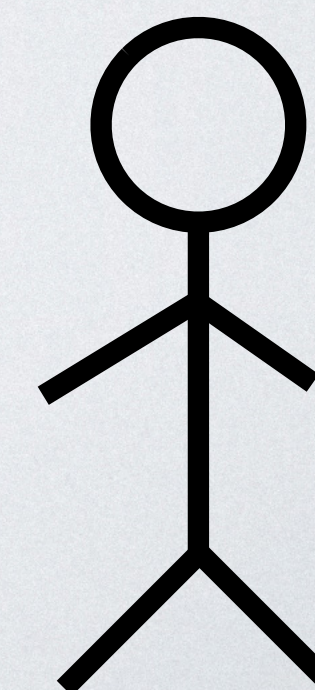
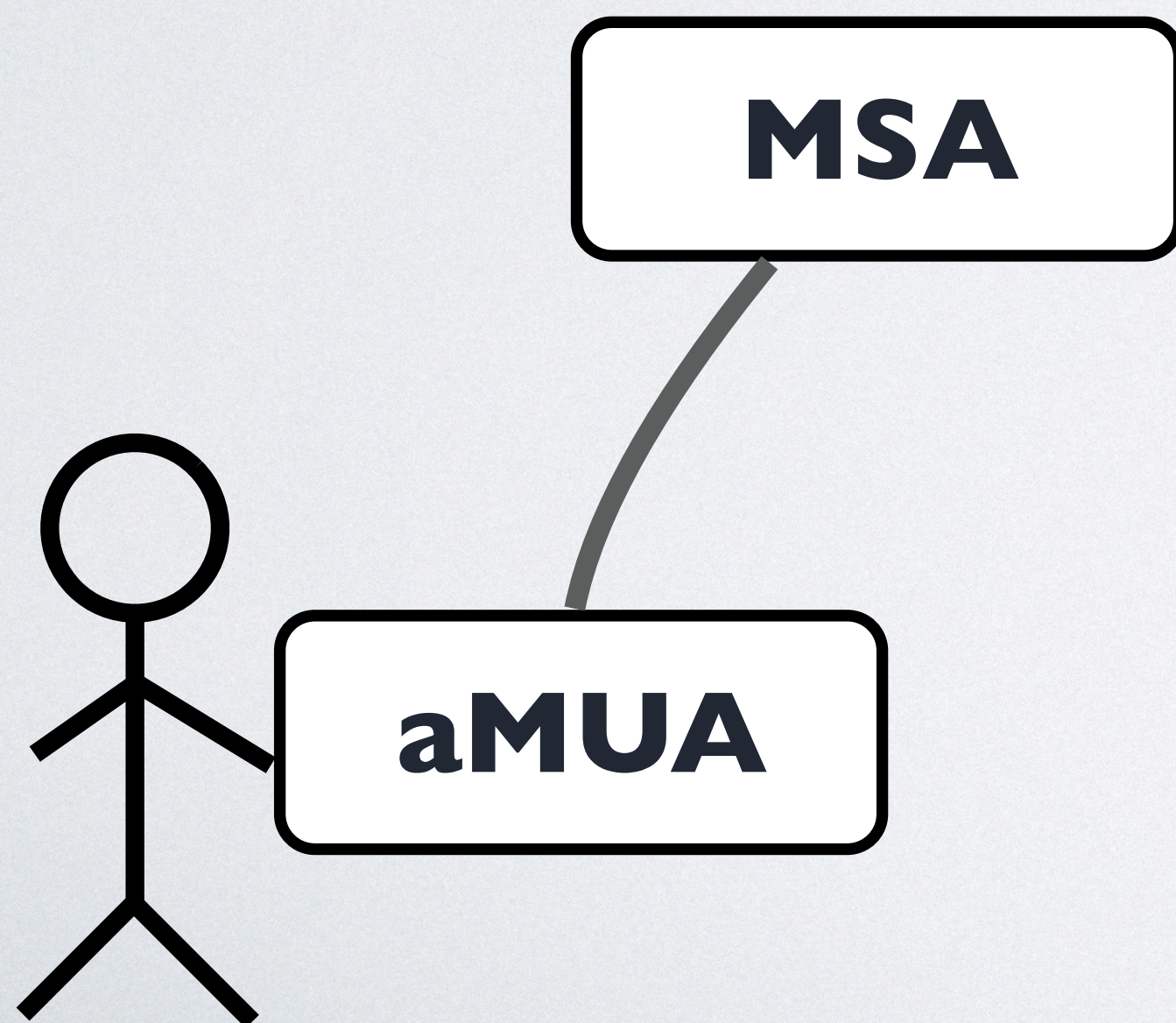
Authoring **M**ail **U**ser **A**gent

Mailprogramm



Mail **S**ubmission **A**gent

Ausgehender Mailserver

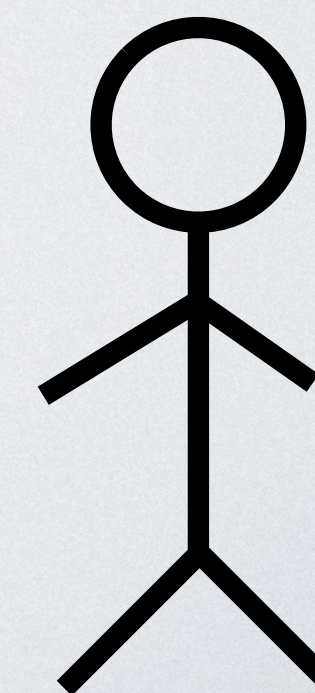
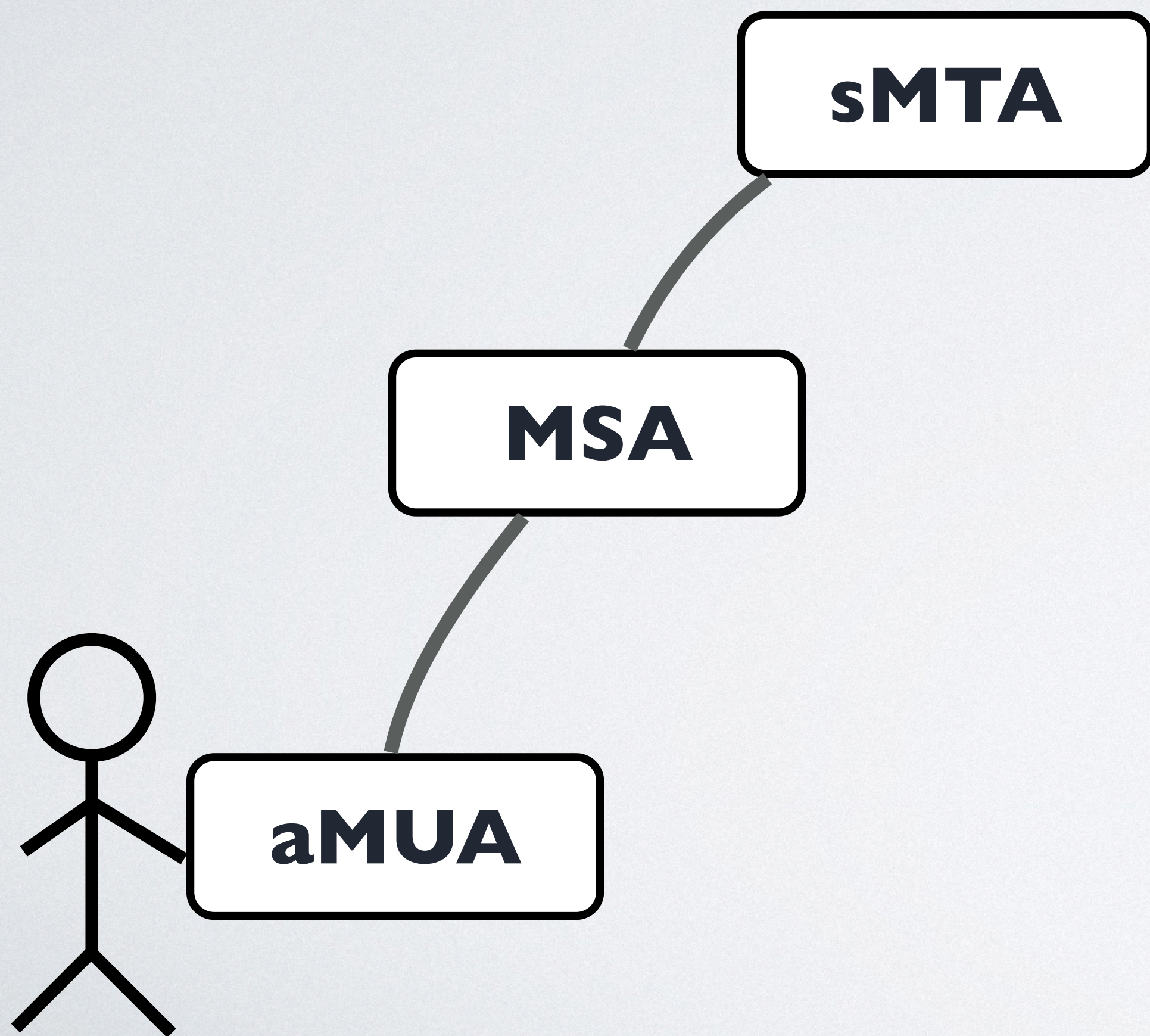


Mail **T**ransport **A**gent

Mailserver

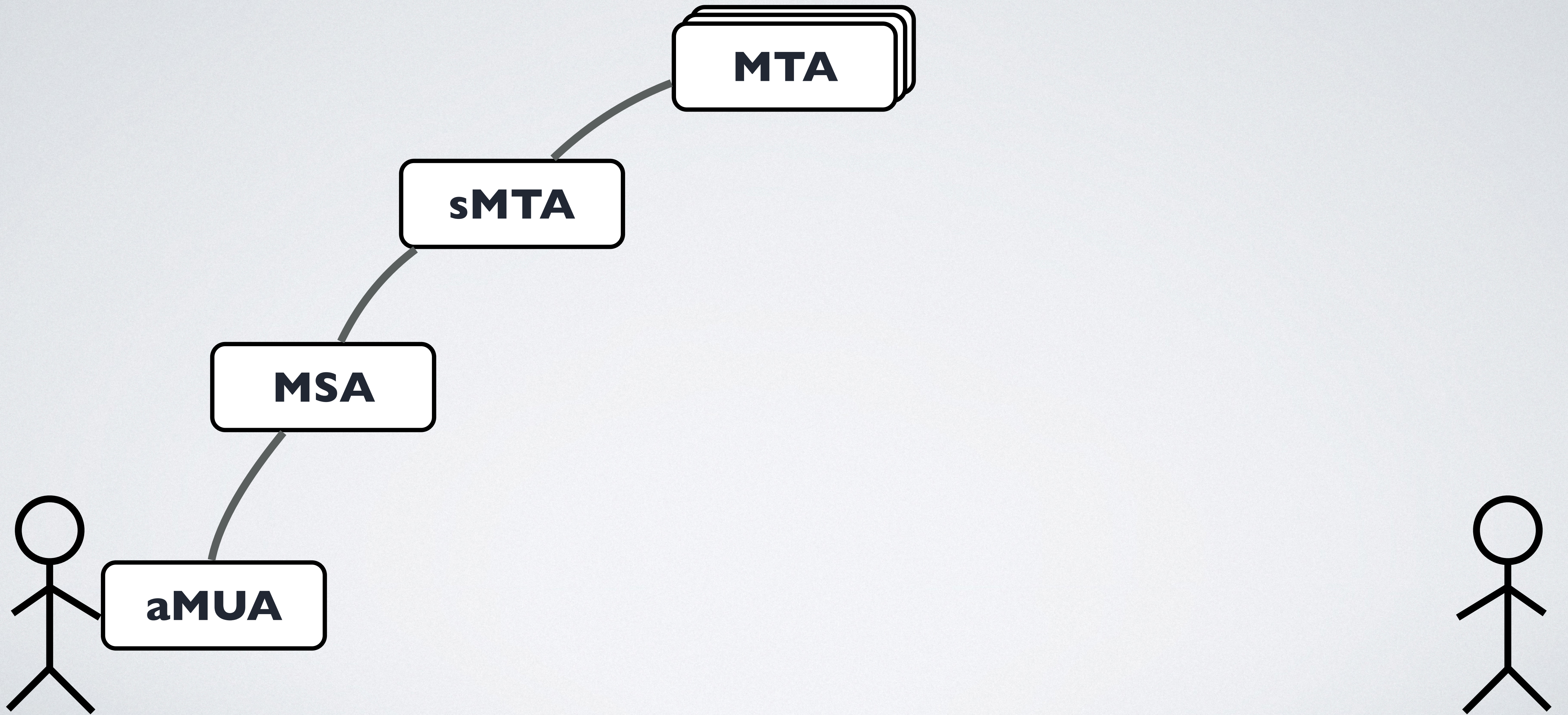
Sending **M**ail **T**ransport **A**gent

Mailserver



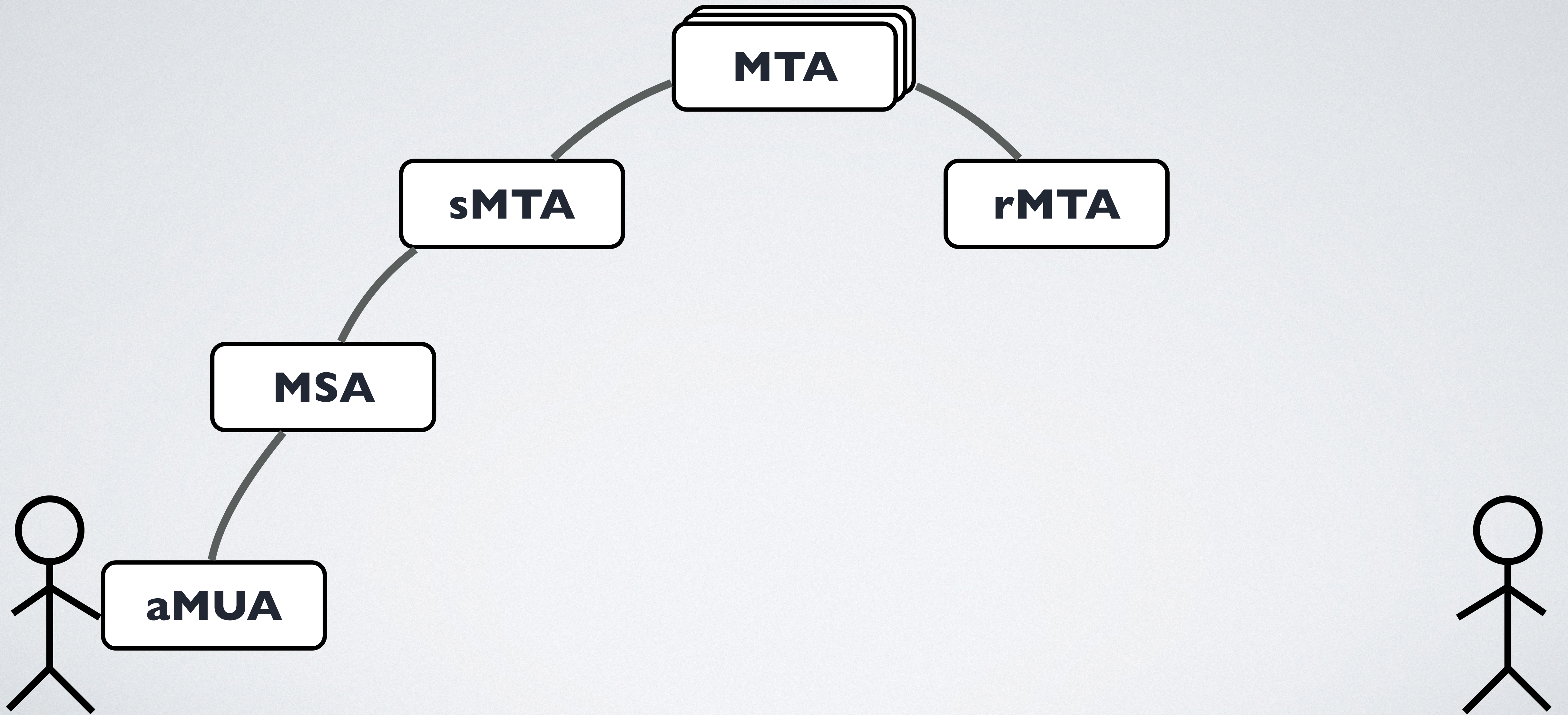
Mail **T**ransport **A**gent

Mailserver



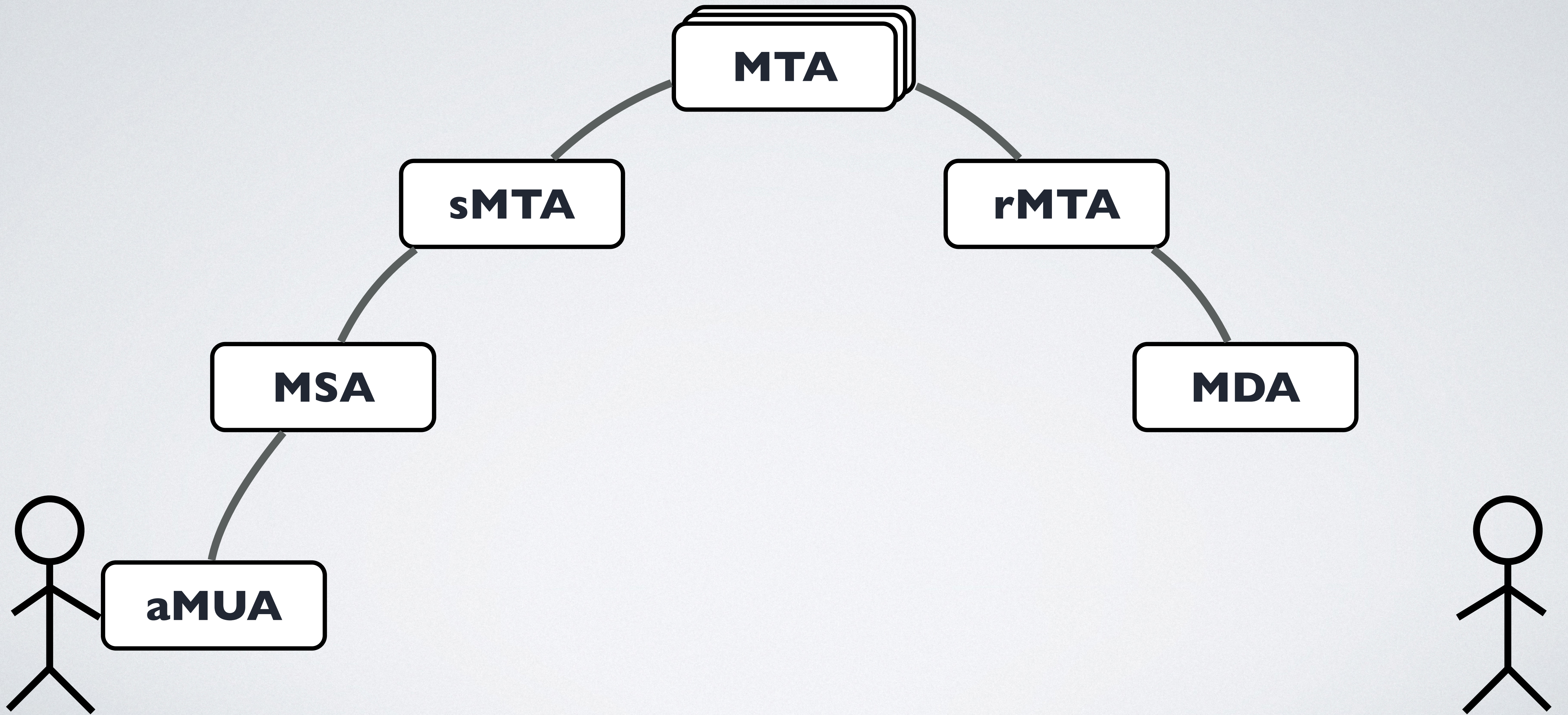
Receiving **M**ail **T**ransport **A**gent

Mailserver



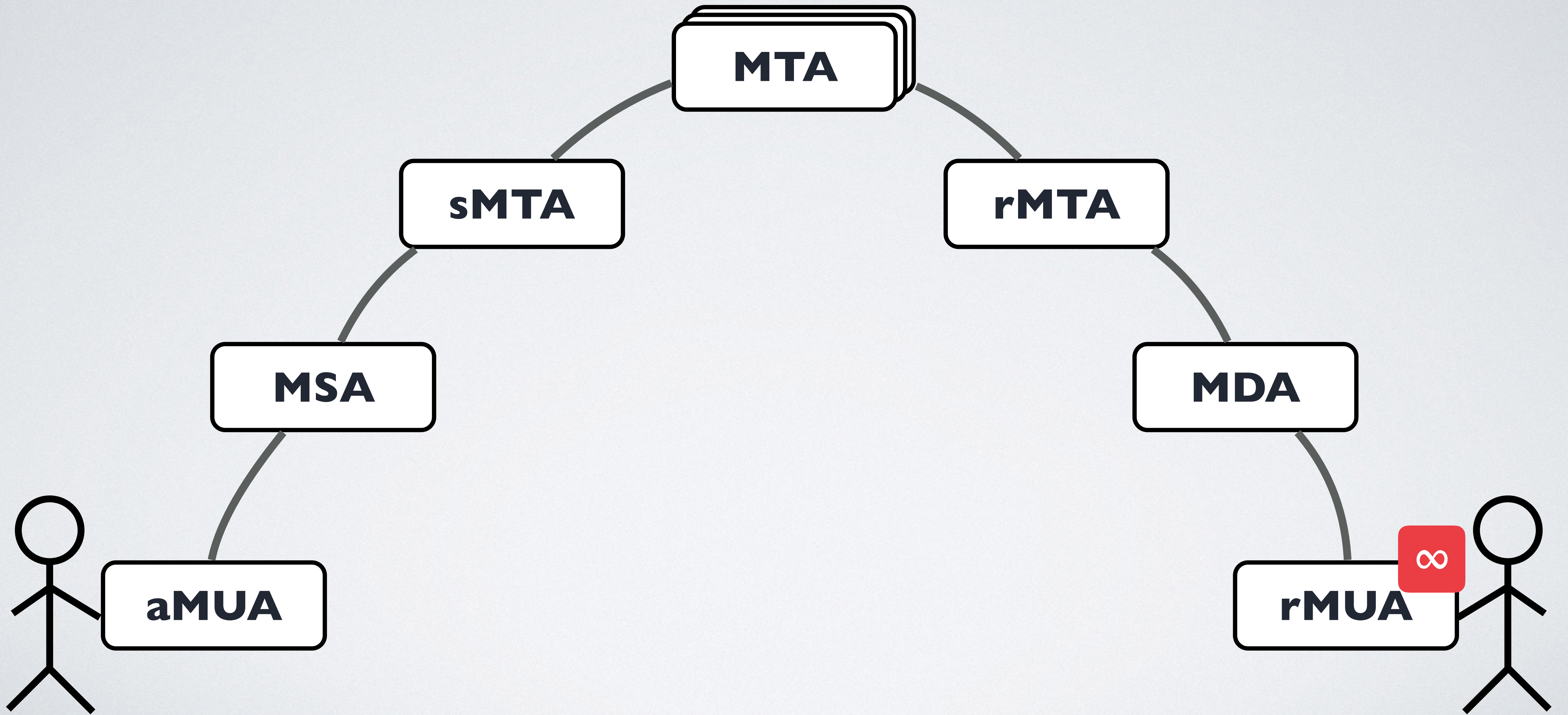
Mail **D**elivery **A**gent

Maileingangsserver



Receiving **M**ail **U**ser **A**gent

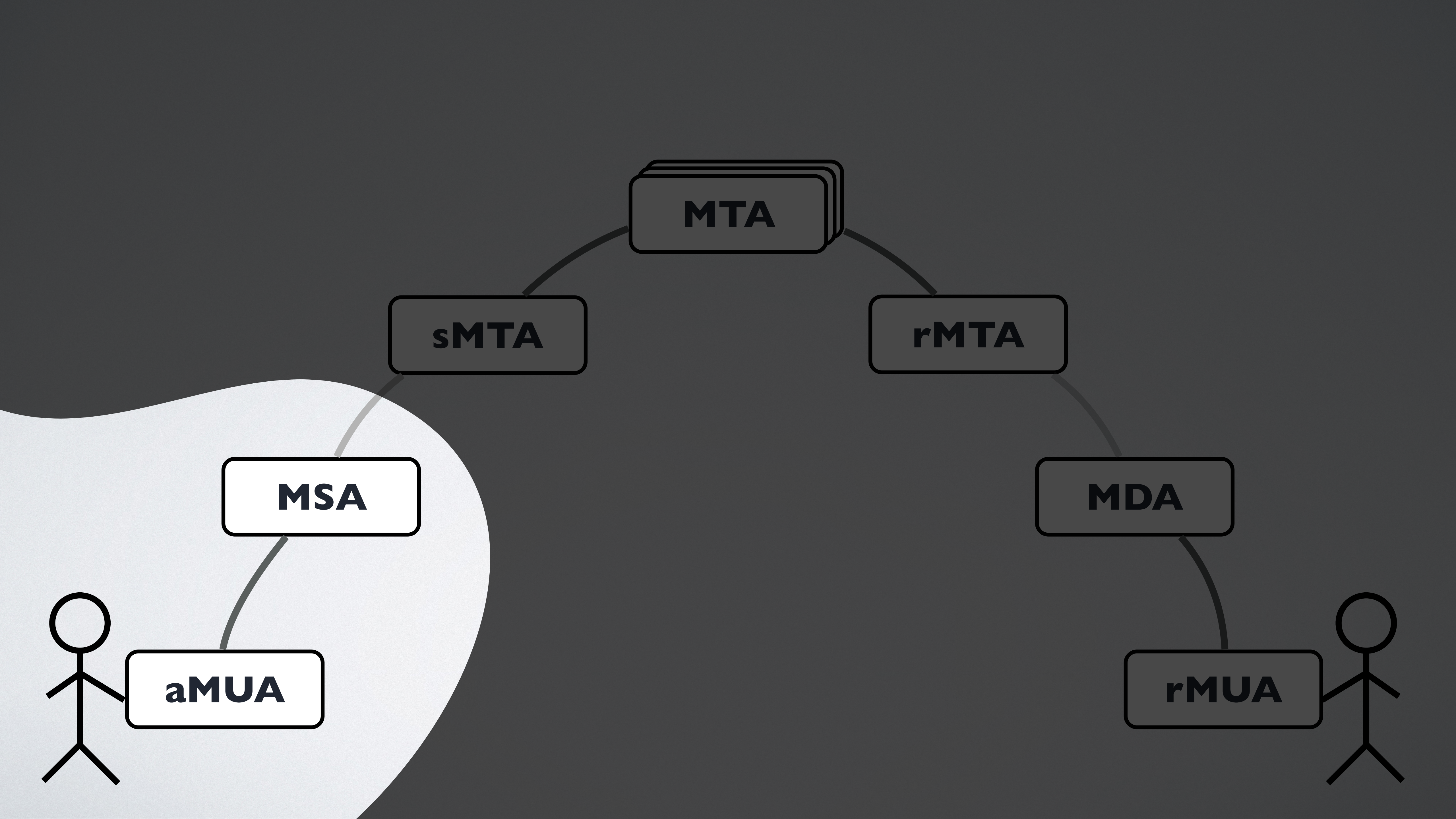
Mailprogramm



Protokoll

aMUA ↔ MSA

Mail versenden



Submission

RFC 2476

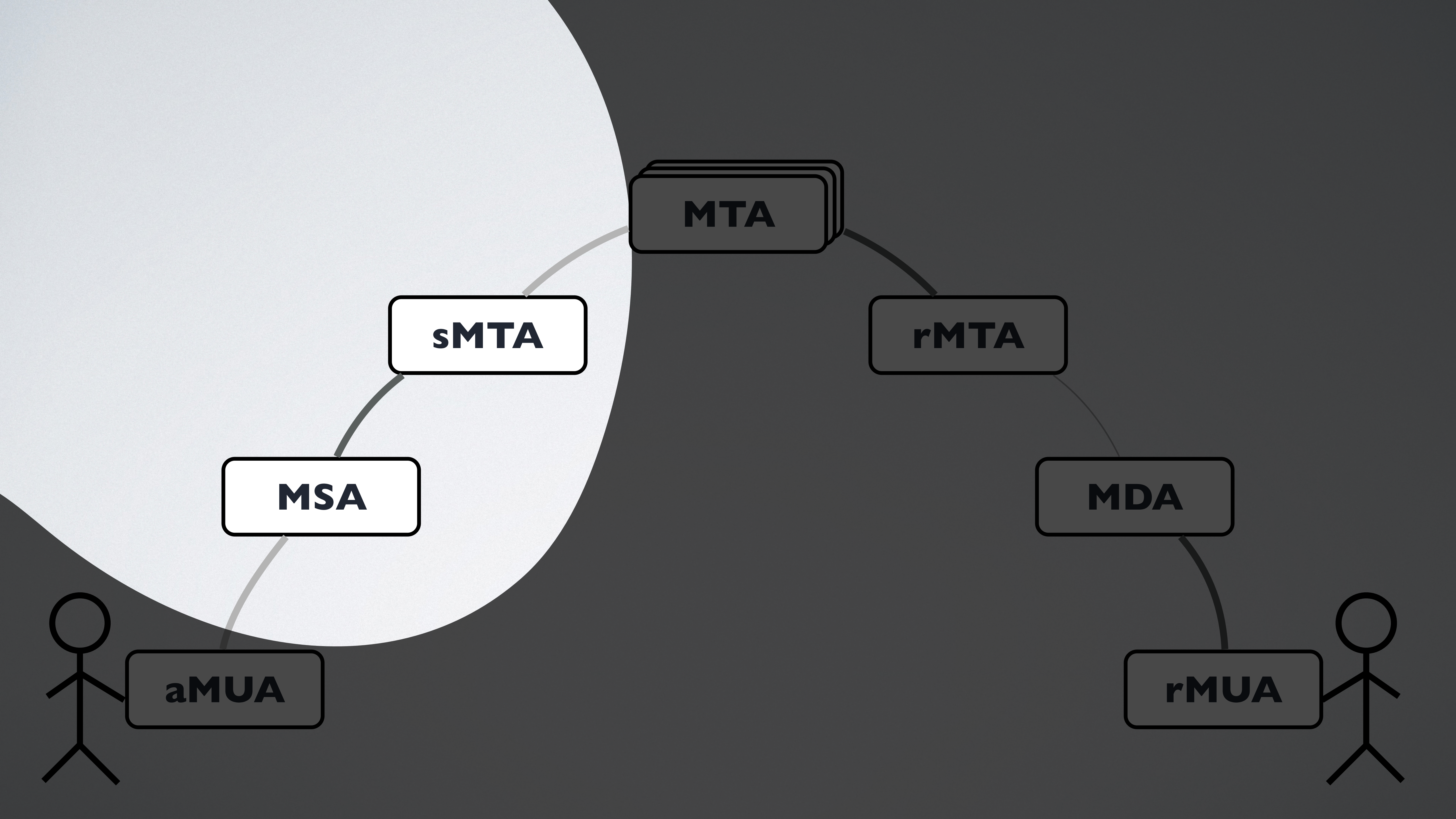
MUA ↔ MSA

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R67CIddGMWf5isQ9vIVQji6rU8GKesltxG3dqLHKvvJUVRXvACqSI t07jDNK
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JCHr5MG7SvmBEWhWCgFVkfP3pjB4CBUtCcCnE9s5UqgBbetAdD65JNWawces
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becXcXFiRrSWJhamgF5cvVKlHrsEdSXhU3dxJ5PDvX9UhtuNarl6H0wVc7Ai**

Incoming Queue

MSA ↔ sMTA

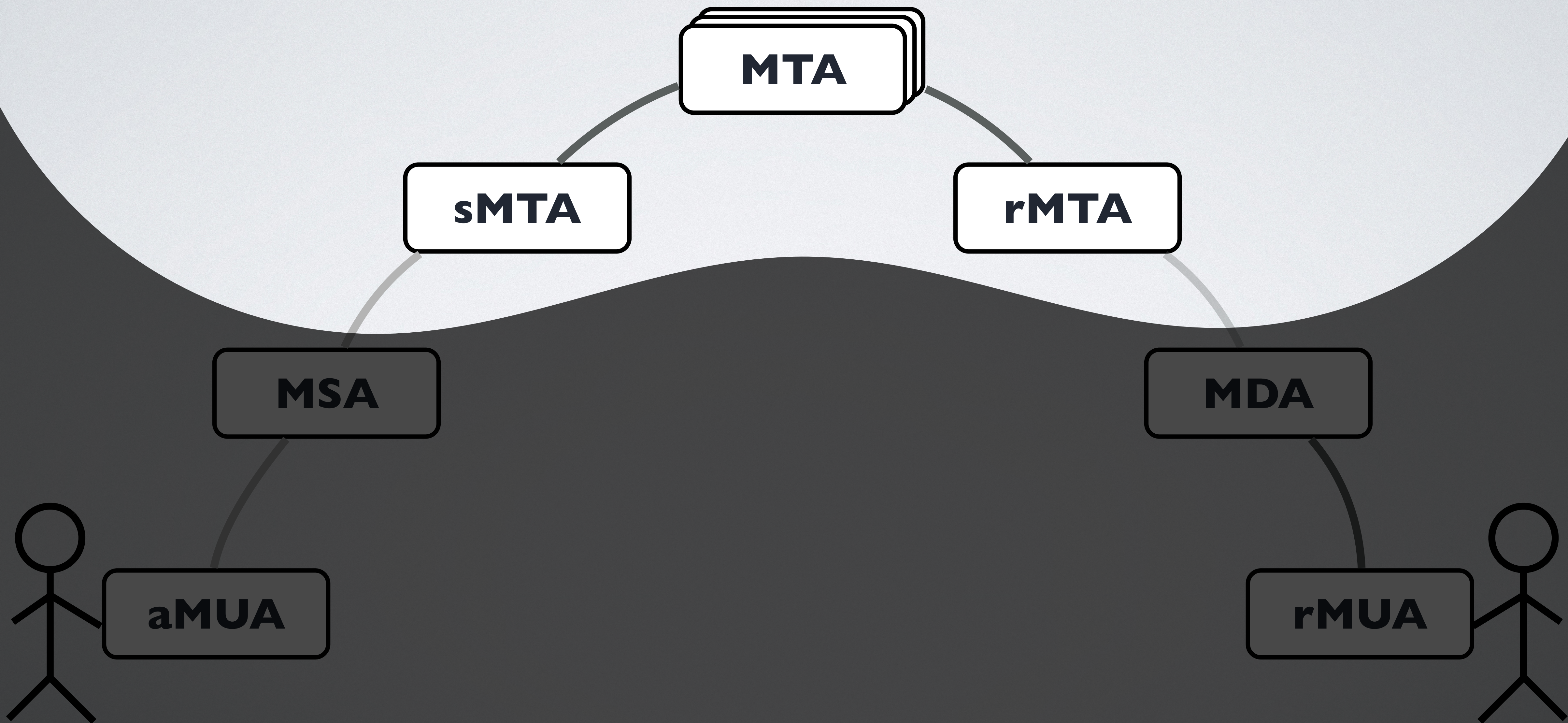
Mail versenden

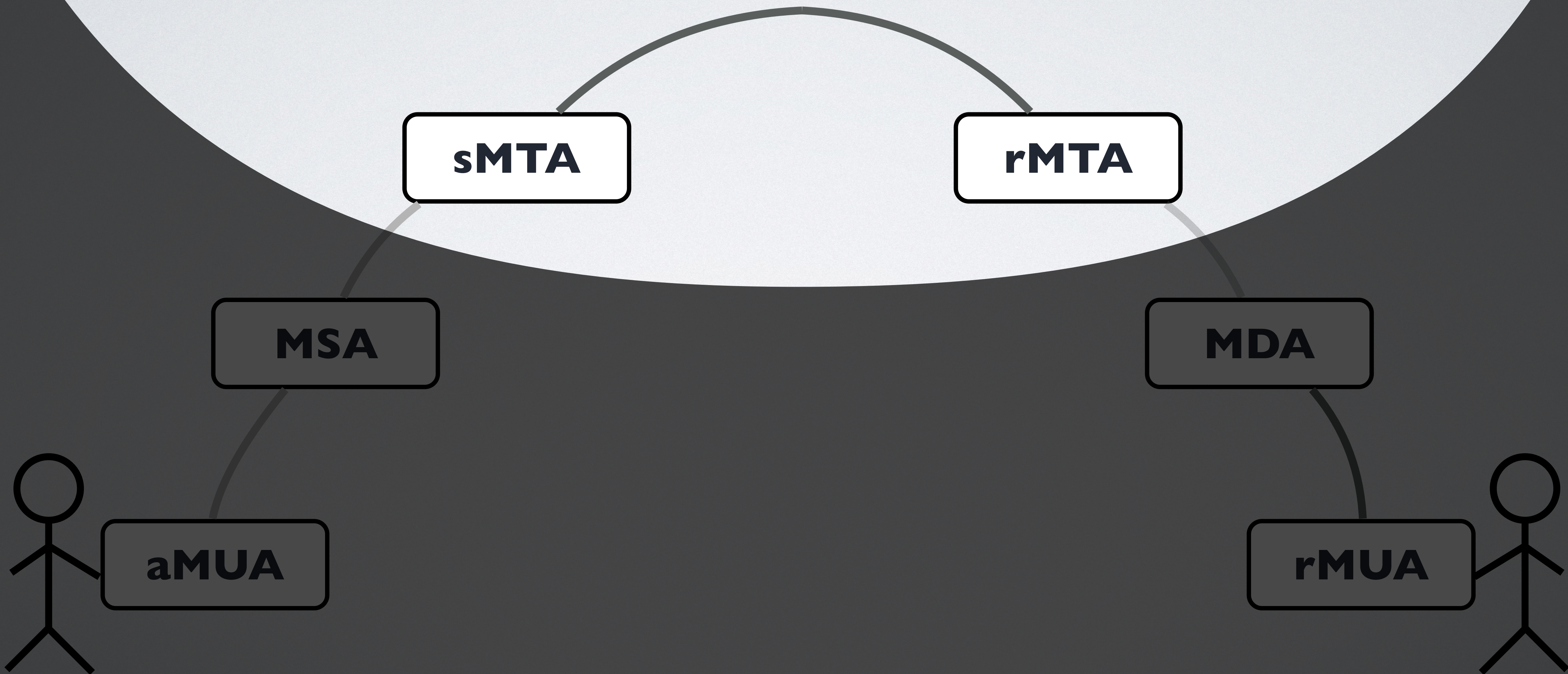


Mailqueue

sMTA ↔ rMTA

Mail übertragen





SMTP

RFC ~~821~~, ~~2821~~, 5321

MX

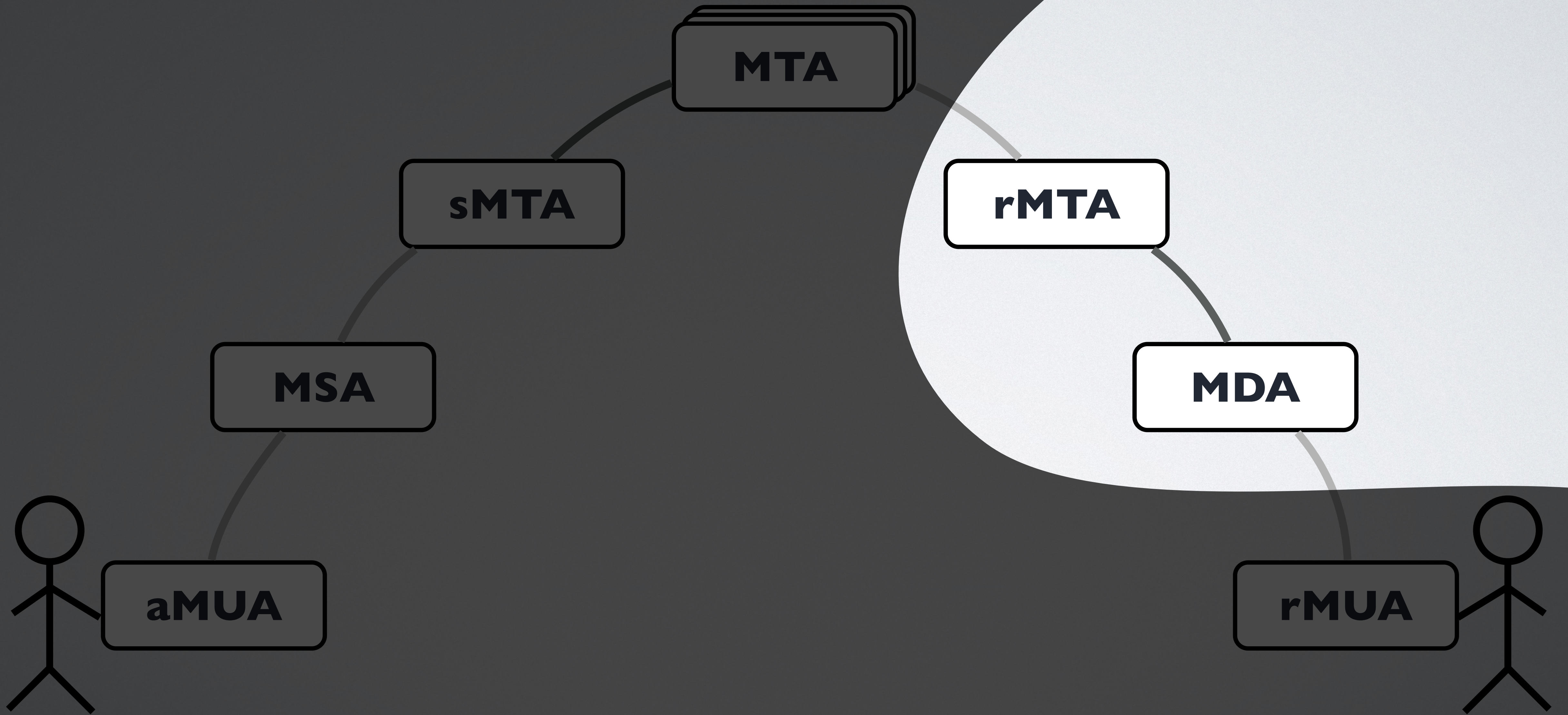
Mail Exchanger

MacLemon — MacLemon@KryptonKraken-Ethernet — ~ — -zsh —...

```
$ host -t MX privacyweek.at  
privacyweek.at mail is  
handled by 10  
dergeraet.c3w.at.
```

rMTA ↔ MDA

Email Zustellung

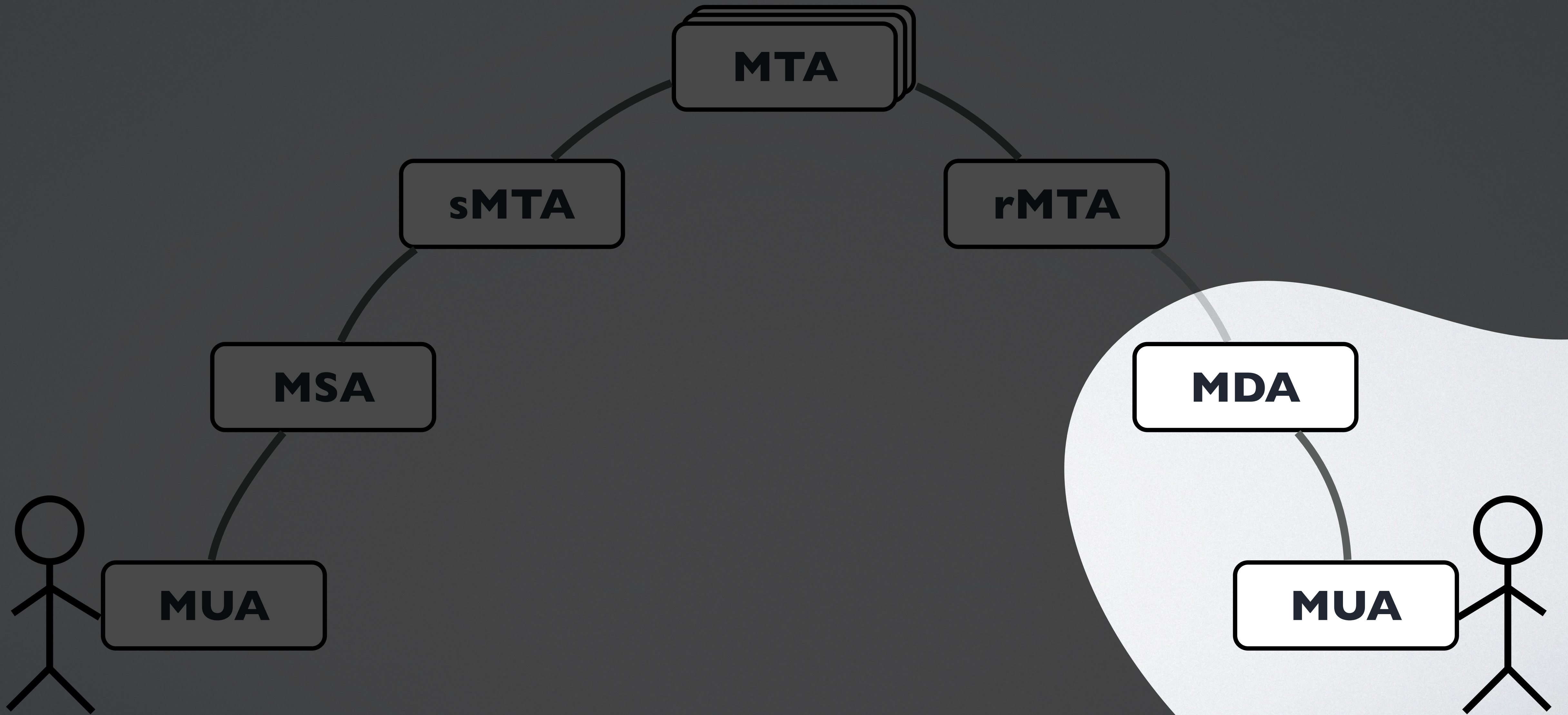


LMTP

Local Mail Transport Protocol

MDA ↔ rMUA

Emails abrufen

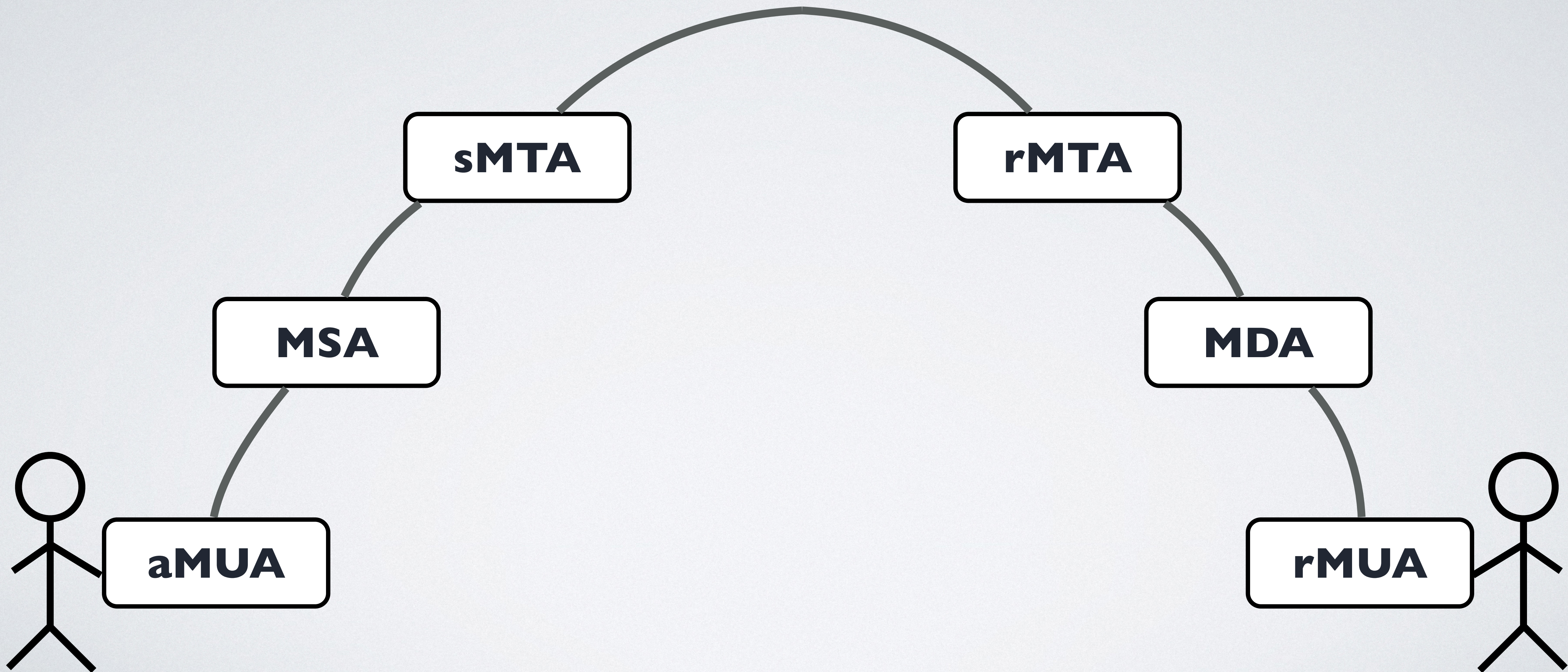


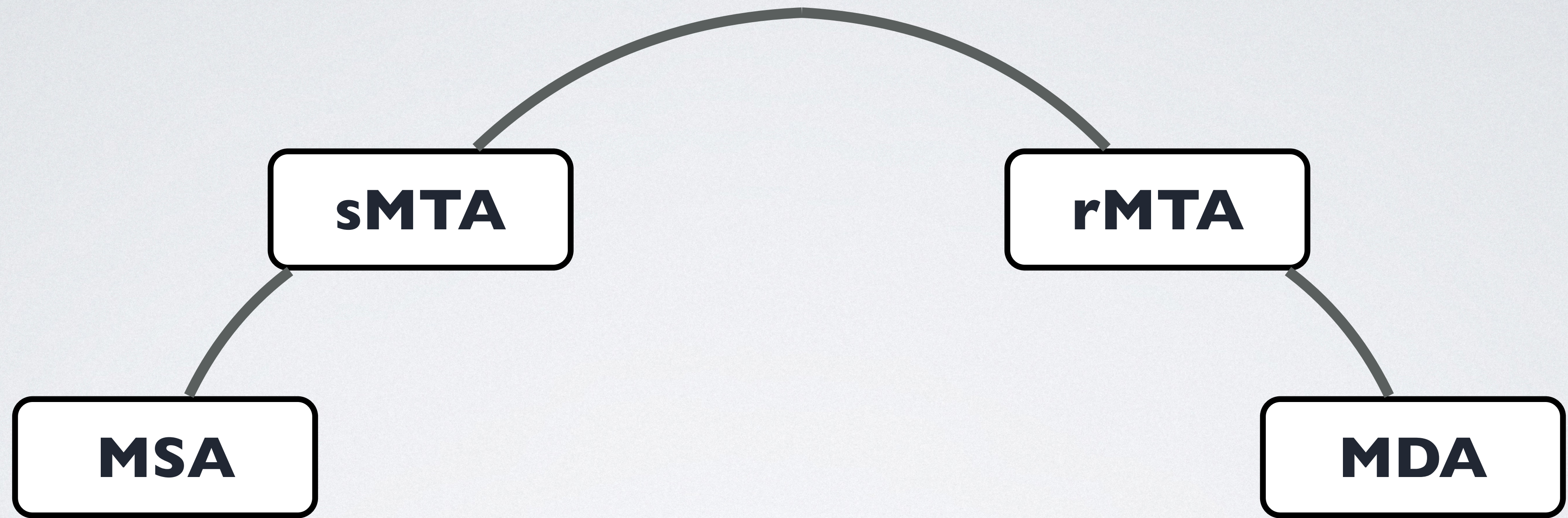
IMAP

Internet **M**essage **A**ccess **P**rotocol

POP

Post **O**ffice **P**rotocol





Nachrichten Inhalte

Header
Body

Header

Von:

An:

Kopie:

Blindkopie:

Betreff:

Body

Text:

Anhänge:

Signaturen:



Email

Von: info@anonyme-alkoholiker.at

An: reblaus@kampftrinker.at

CC: office@wgkk.at

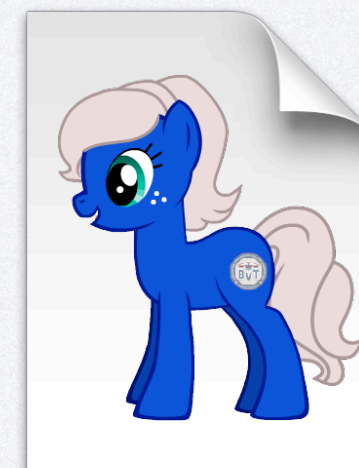
Blindkopie: k.brinkmann@schwarzwaldklinik.de

2 Zeitstempel: Fri Oct 26 18:23:42 CEST 2018

Betreff: Re: Überwachungssta.at Flyer

Inhalt: Liebes BVT!

Anhänge: Pwnies.pdf





Email

Von: info@anonyme-alkoholiker.at

An: reblaus@kampftrinker.at

CC: office@wgkk.at

Blindkopie: k.brinkmann@schwarzwaldklinik.de

2 Zeitstempel: Fri Oct 26 18:23:42 CEST 2018

Betreff: Re: Überwachungssta.at Flyer

Inhalt: Liebes BVT!

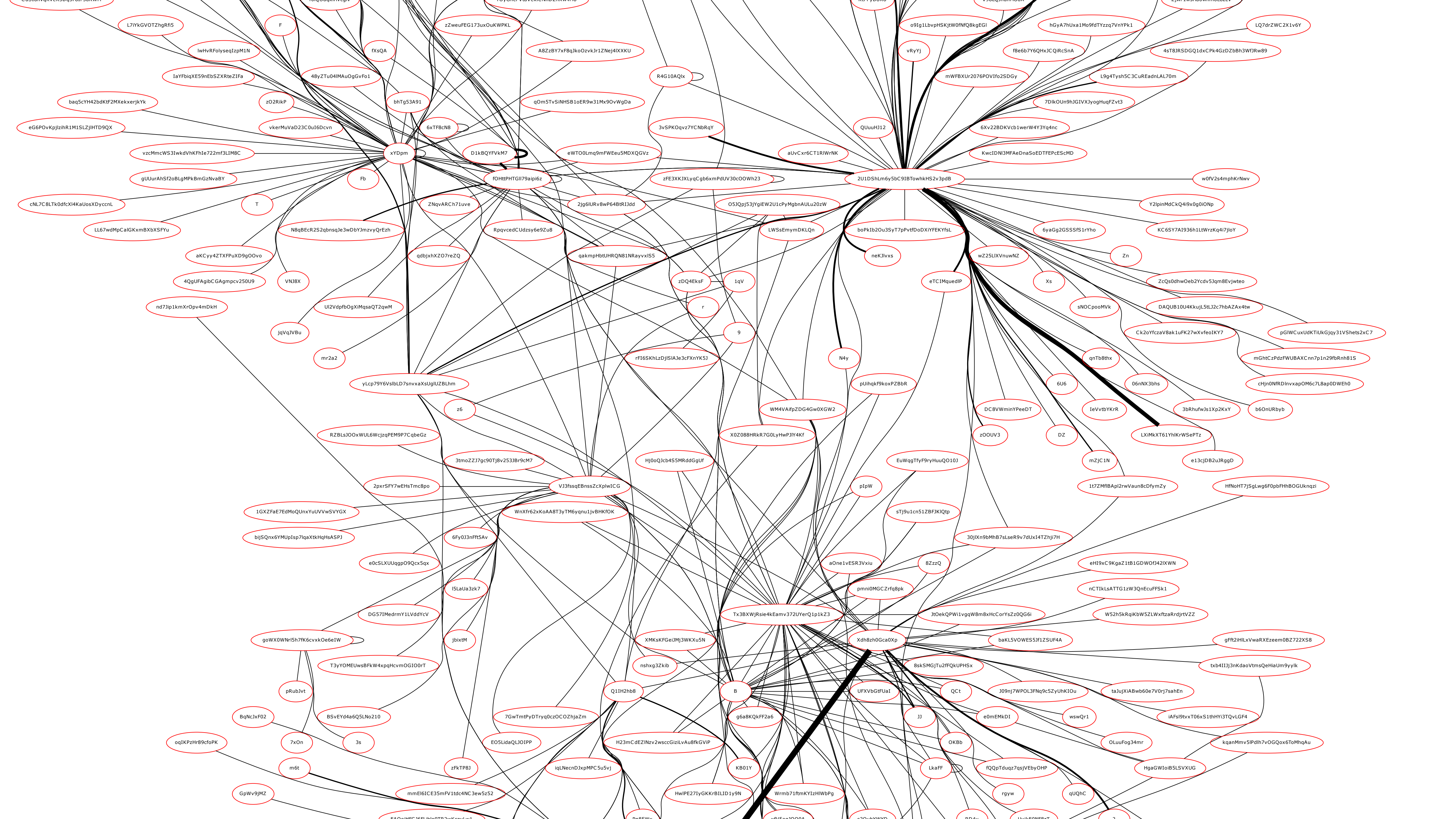
Anhänge: Pwnies.pdf



Return-Path: <*****@easterhegg.eu>
Delivered-To: *****@prometheus.maclemon.at
Received: from localhost (localhost [127.0.0.1])
by prometheus.maclemon.at (Postfix) with ESMTP id D5F0A473A250
for <*****@prometheus.maclemon.at>; Mon, 30 Nov 2015 13:42:00 +0100 (CET)
X-Virus-Scanned: amavisd-new at prometheus.maclemon.at
X-Spam-Flag: NO
X-Spam-Score: -0.002
X-Spam-Level:
X-Spam-Status: No, score=-0.002 tagged_above=-999 required=4
tests=[BAYES_20=-0.001, SPF_PASS=-0.001] autolearn=ham
Received: from prometheus.maclemon.at ([127.0.0.1])
by localhost (prometheus.maclemon.at [127.0.0.1]) (amavisd-new, port 10024)
with ESMTP id Q-fgskFHsf83
for <*****@prometheus.maclemon.at>;
Mon, 30 Nov 2015 13:42:00 +0100 (CET)
Received: from mx0.chaostreff.at (mx0.chaostreff.at [81.7.3.50])
(using TLSv1 with cipher DHE-RSA-AES256-SHA (256/256 bits))
(No client certificate requested)
by prometheus.maclemon.at (Postfix) with ESMTPS id DC353473A246
for <*****@maclemon.at>; Mon, 30 Nov 2015 13:41:59 +0100 (CET)
Received: from localhost.localdomain (unknown [172.23.171.10])
by mx0.chaostreff.at (Postfix) with ESMTP id F573DC3AB9
for <*****@maclemon.at>; Mon, 30 Nov 2015 12:41:58 +0000 (GMT)
Date: Mon, 30 Nov 2015 13:41:58 +0100
From: *****@easterhegg.eu
To: *****@maclemon.at
Message-ID: <c03a74de-a0af-4ff3-a072-567fbd5c44e5@easterhegg.eu>
Subject: EH16 presale
Mime-Version: 1.0
Content-Type: text/plain;
charset=UTF-8
Content-Transfer-Encoding: quoted-printable

X-Campaign: mailchimp52fd92e91981dc9a133ca4819f.94dc00c28c
X-campaignid: mailchimp52fd92e91981dc9a133ca4819f.94dc00c28c
X-Report-Abuse: Please report abuse for this campaign here: <http://www.mailchimp.com/abuse/abuse.phtml?u=52fd92e91981dc9a133ca4819f&id=94dc00c28c&e=25c81219ca>
X-MC-User: 52fd92e91981dc9a133ca4819f
X-Feedback-ID: 91876:91876.19456:us1:mc
List-ID: 52fd92e91981dc9a133ca4819fmc list <52fd92e91981dc9a133ca4819f.85.list-id.mcsvg.net>
Precedence: bulk
X-Auto-Response-Suppress: 00F, AutoReply
X-Accounttype: pd
List-Unsubscribe: <mailto:unsubscribe-mc.us1_52fd92e91981dc9a133ca4819f.94dc00c28c-25c81219ca@mailin1.us2.mcsvg.net?subject=unsubscribe>, <<http://twittercounter.us1.list-manage.com/unsubscribe?u=52fd92e91981dc9a133ca4819f&id=94dc00c28c&e=248ag910a00&c=123d5825c>>
Sender: "Twitter Counter" <support=twittercounter.com@email1.thenextweb.com>
x-mcda: FALSE

User-Agent: Mozilla/5.0 (X11; Linux x86_64; rv:38.0)
Gecko/20100101
Thunderbird/38.3.0





Joseph Cox

@josephfcox



Follow



When someone starkly reminds you what PGP doesn't protect

Your 20" Lifelike Horse Dong has shipped! (Discreet packaging)

Inbox x



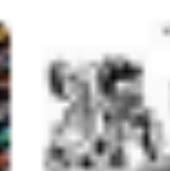
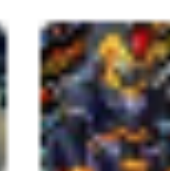
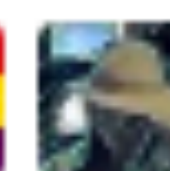
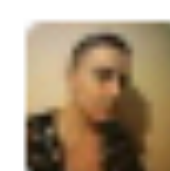
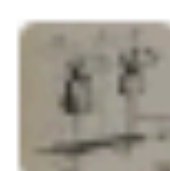
-----BEGIN PGP MESSAGE-----

RETWEETS

143

LIKES

212



2:56 AM - 27 Mar 2017



7



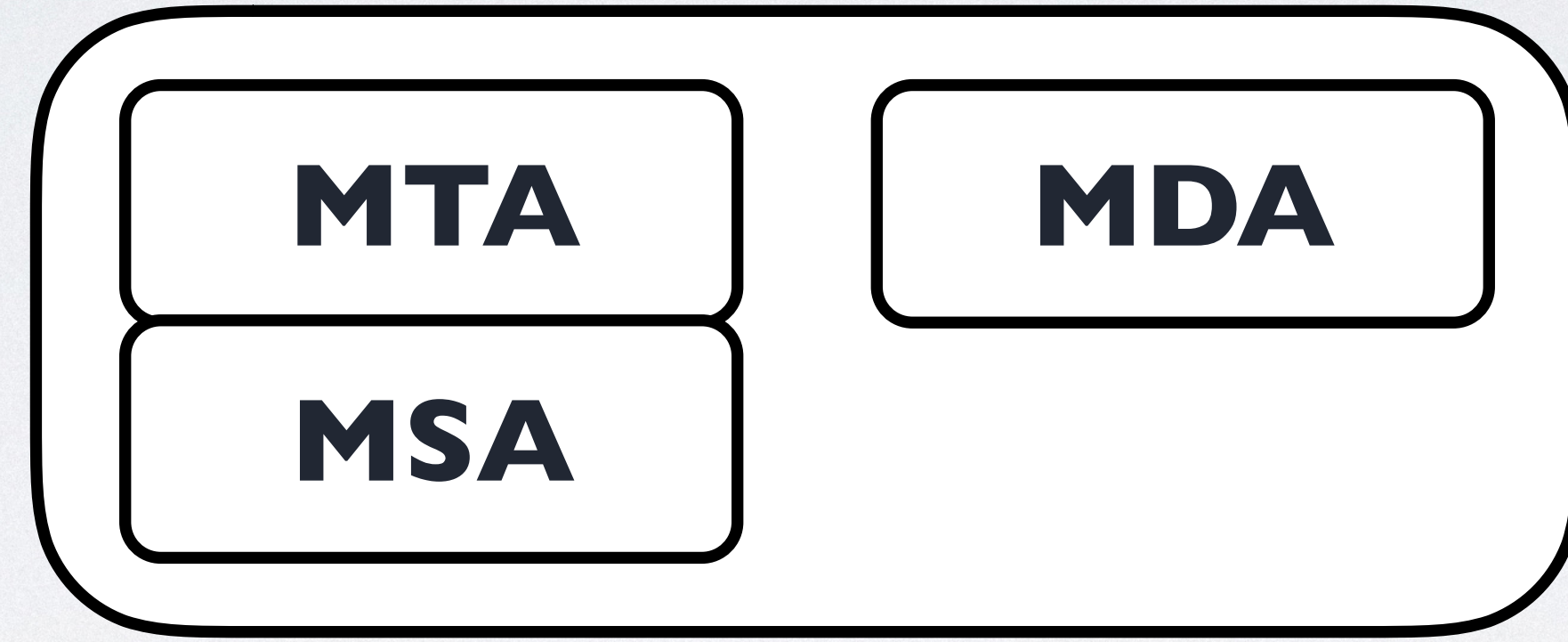
143



212

X-ID2ADBB6E24B2B84AFD7D2D6B4F9ADEF X-ABS-CHECKED X-ACL-Warn X-AGIS-SPAMCHECKED X-AOL-IP X-AOL-SCOLL-SCORE X-AOL-SCOLL-URL_COUNT X-ASG-Debug-ID X-ASG-Orig-Subj X-ASG-RBL-Restriction X-ASG-Tag X-ATTACHMENT-NUM X-AV-Checked X-AV-Note X-AVScan X-Accept-Language X-Accounttype X-Actual-Recipient X-Alimail-AntiSpam X-Amavis-Alert X-Anti-Virus X-AntiAbuse X-AntiSpam-SPF X-AntiSpam-Status X-AntiVirus X-Antivirus X-Antivirus-Code X-Antivirus-LIC X-Antivirus-LIC-Mail-From X-Antivirus-MalagaWagen X-Antivirus-MalagaWagen-Mail-From X-Antivirus-Status X-Antivirus-globalctg.net X-Antivirus-globalctg.net-Mail-From X-Antivirus-tat.ru X-Antivirus-tat.ru-Mail-From X-Antivirus-unze.ba X-Antivirus-unze.ba-Mail-From X-Apple-Content-Length X-Attach-Flag X-AuditID X-Auth X-Auth-bits X-Authenticated-Sender X-Authentication-Warning X-Authority-Analysis X-Auto-Response-Suppress X-Autorespond X-Avenger X-BBounce X-Barracuda-BRL-Tag X-Barracuda-Connect X-Barracuda-Spam-Flag X-Barracuda-Spam-Report X-Barracuda-Spam-Score X-Barracuda-Spam-Status X-Barracuda-Start-Time X-Barracuda-URL X-Barracuda-Virus-Scanned X-Bass Funktion</small></small></small> X-BeenThere X-Biglobe-VirusCheck X-BitDefender-Scanner X-Bmi-Source X-BorderWare-Security-Platform-Queue-ID X-BorderWare-Security-Platform-Sender X-Boxtrapper X-Brightmail X-Brightmail-Tracker X-Bulk X-Business-Group X-CLX-Score X-CLX-Shades X-CLX-Spam X-CLX-UShades X-CLX-UnSpecialScore X-CM-Score X-CNFS-Analysis X-CP-For X-CP-PS-Service X-CP-RMS-Attachments X-CP-RMS-C-Element X-CP-RMS-Display X-CP-RMS-Expiry X-CP-RMS-QUERY-Element X-CP-RMS-Site X-CP-RMS-Size X-CP-RMS-Type X-CP-RMS-V-Element X-CP-Transaction-ID X-CS-IP X-CSA-Complaints X-CSI-MailScanner X-CSI-MailScanner-From X-CSI-MailScanner-Information X-CSI-MailScanner-SpamCheck X-CT-RefID X-CTCT-ID X-Campaign X-Campaign-Activity-ID X-Campid X-Ccmld X-Channel-ID X-ClientAddr X-Complaints-To X-Complaints-to X-Concentric-DKIM X-Concentric-MX-Info X-ConcentricHost-3-5--MX-Queue-ID X-ConcentricHost-3-5--MX-Sender X-Confirm-Reading-To X-Connecting-Addr X-Connecting-Host X-Converted-To-Plain-Text X-Copyrighted-Material X-CrossExchange-Queue-ID X-CrossExchange-Sender X-DKIM_SIGN_REQUIRED X-DM-Templet-ReadReply X-DSN-Junkmail X-DSN-Junkmail-Status X-DSNContext X-David-Flags X-David-Sym X-Declude-Sender X-Destination-ID X-Direct X-Display-Name X-DrWeb-FlyTrap-CID X-DrWeb-FlyTrap-Class X-DrWeb-FlyTrap-ID X-Drop-Meta X-EASYNET-FROM X-EASYNET-HELO X-EASYNET-IP X-EASYNET-TO X-EC0D2A8E-5CB7-4969-9C36-46D859D I 37BE-PartID X-ELNK-Trace X-EMSCustId X-ESAFE-DETAILS X-ESAFE-STATUS X-EYOU-DEALDRC X-EYOU-SPAMVALUE X-Eid X-EmailId X-EmailInvitationId X-Env-Sender X-Envelope-From X-Envelope-To X-Errors-To X-ExAntiSpamFlags X-ExSpamID X-FID X-Failed-Recipients X-Feedback-ID X-Fib-AI X-Fib-AI-From X-Fib-AI-Info X-Fib-AI-MXId X-Fib-AI-SA X-Filter-ID X-Flags X-Footer X-GFI-SMTP-HelloDomain X-GFI-SMTP-RemotelP X-GFI-SMTP-Submission X-GMSSender-Dir X-GMSSender-Rec X-GMX-Antispam X-GMX-Antivirus X-GMX-Htest X-GMX-UID X-GameRanger-ID X-Gazduire-MailScanner X-Gazduire-MailScanner-From X-Gazduire-MailScanner-Information X-Gazduire-MailScanner-SpamCheck X-Get-Message-Sender-Via X-Gm-Message-State X-Google-DKIM-Signature X-Google-Loop X-Google-Smtp-Source X-Greylist X-Haraka-GeoIP X-Has-Attach X-Header-CompanyDBUserName X-Header-MasterId X-Header-Versions X-HiNet-Brightmail X-Hosts-DKIM-Check X-IADB2 X-IDDB X-IEPI-MailScanner X-IEPI-MailScanner-From X-IEPI-MailScanner-ID X-IEPI-MailScanner-Information X-IEPI-MailScanner-SpamCheck X-IEPI-MailScanner-SpamScore X-IMAIL-SPAM-DNSBL X-IMAIL-SPAM-PREMIUM X-IMAIL-SPAM-STATISTICS X-IP X-IncomingHeaderCoun X-Info X-Inode-Forwarded X-Inode-Scanner X-Inode-SpamBar X-Inode-SpamFlag X-Inode-SpamReport X-Inode-SpamScore X-InterScanMSS-Queue-ID X-InterScanMSS-Sender X-IronPort-AV X-IronPort-Anti-Spam-Filtered X-IronPort-Anti-Spam-Result X-JMailer X-KSVirus-check X-LOGIN-NAME X-List-Administrivia X-Loop X-Loop-Detect X-MAILER X-MANTSH X-MAPI-Message-Class X-MC-User X-MDHeloLookup-Result X-MDRemotelP X-MDaemon-7-1-2-Queue-ID X-MDaemon-7-1-2-Sender X-MDaemon-Deliver-To X-ME-Bayesian X-ME-UUID X-MEFilter X-MID X-MIME-Autoconverted X-MIMEOLE X-MIMETrack X-MS-Embedded-Report X-MS-Exchange-CrossTenant-Network-Message-Id X-MS-Exchange-CrossTenant-fromentityheader X-MS-Exchange-CrossTenant-id X-MS-Exchange-CrossTenant-originalarrivaltime X-MS-Exchange-Transport-CrossTenantHeadersStamped X-MS-Has-Attach X-MS-TNEF-Correlator X-MSFBL X-MSMail-Priority X-MSMail-priority X-MTA-Queue-ID X-MTA-Sender X-MW-AbuseID X-Mail-Filters-Spam X-Mail-Scanner X-MailFlowPolicy X-MailScanner-ID X-Mailer X-Mailer-LID X-Mailer-RecptId X-Mailer-SID X-Mailer-Sent-By X-Mailfilter X-Mailgun-List-Address X-Mailgun-List-Id X-Mailgun-Sending-Ip X-Mailgun-Sid X-Mailin-Campaign X-Mailin-Client X-MailingID X-Mailman-Version X-MailsCan X-Mandrill-User X-Memberid X-Message-Auth X-Message-ID X-Message-Info X-Message-Received X-MessageID X-Midray-ID X-MimeOLE X-Mimeole X-Modus-Audit X-Modus-BlackList X-Modus-RBL X-Modus-ReverseDNS X-Modus-Trusted X-Msg-EID X-Msg-Ref X-NAI-Header X-NAI-Spam-Checker-Version X-NAI-Spam-Flag X-NAI-Spam-Level X-NAI-Spam-Report X-NAI-Spam-Route X-NAI-Spam-Rules X-NAI-Spam-Score X-NAI-Spam-Threshold X-NoSpamFilter X-Note X-OB-Received X-Original-From X-Original-Id X-Original-Sender X-Original-To X-OriginalArrivalTime X-OriginalSender X-Originating-Email X-Originating-IP X-Originating-Ip X-Originating-Server X-OriginatorOrg X-PFSI-Info X-PHP-Originating-Script X-PMX-Spam X-PMX-Version X-PPP-Message-ID X-PPP-Vhost X-PSD-Mail-Daemon-Queue-ID X-PSD-Mail-Daemon-Sender X-PVIQ X-Path X-PerlMx-Spam-GW X-PerlMx-Spam-UR X-Plusnet-AS-Test X-Postfix-Queue-ID X-Postfix-Sender X-Powered-BY X-Precedence X-Priority X-Proofpoint-Spam-Details X-Proofpoint-Spam-Reason X-Proofpoint-Virus-Version X-Proprietary-Queue-ID X-Proprietary-Sender X-Pviq X-Qmail-Scanner-MOVED-X-Spam-Status X-Quarantine-ID X-RBL-Warning X-RMX-ID X-RMX-MQ X-RT-Loop-Prevention X-RT-Original-Encoding X-RZG-CLASS-ID X-RZG-SCRIPT X-Received X-Received-From-Address X-Receiver X-Recommended-Action X-Relaying-Domain X-Remote-IP X-Report-Abuse X-Report-Abuse-To X-ReportingKey X-Return-Path X-Return-Path-Hint X-Rocket-Spam X-Rocket-Track X-Roving-Campaignid X-Roving-Id X-Rptags X-SA-Do-Not-Run X-SA-Exim-Connect-IP X-SA-Exim-Mail-From X-SA-Exim-Scanned X-SA-Exim-Version X-SAV-MessageID X-SBRS X-SCL X-SEG X-SENDER X-SENDER-IP X-SES-Outgoing X-SF-Loop X-SG-EID X-SG-ID X-SKE-CHECKED X-SMFBL X-SMHeaderMap X-SMTPSvr X-SPF-AUTH X-SPF-Result X-Sail-Id X-Sanitizer X-Sanitizer-Rev X-Sanitizer-URL X-Scanned-By X-Sender X-SenderGroup X-SenderIP X-Sendio-RemoteSenderIP X-Sendio-SenderIP X-Sendmail-Queue-ID X-Sendmail-Sender X-Sensitivity X-Sent-From X-Sent-To X-Sieve X-Source X-Source-Args X-Source-Dir X-SourcelP X-Spam X-Spam-ASN X-Spam-Action X-Spam-Bar X-Spam-Checker-Version X-Spam-Details X-Spam-Flag X-Spam-Flaged X-Spam-Gateway X-Spam-ID X-Spam-Level X-Spam-Mail-Flag X-Spam-Method X-Spam-Orig-To X-Spam-Prev-Subject X-Spam-Processed X-Spam-Rate X-Spam-Reasons X-Spam-Report X-Spam-Score X-Spam-Skore X-Spam-Status X-Spam-TU-Processing-Host X-Spam-Ystatus X-Spam-Yversion X-SpamExperts-Domain X-SpamExperts-Outgoing-Class X-SpamExperts-Outgoing-Evidence X-SpamExperts-Username X-SpamTest-Categories X-SpamTest-Envelope-From X-SpamTest-Group-ID X-SpamTest-Info X-SpamTest-Method X-SpamTest-Rate X-SpamTest-SPF X-SpamTest-Status X-SpamTest-Status-Extended X-SpamTest-Version X-Spam_score X-Spamarrest-noauth X-Spamarrest-speedcode X-Spread-CampaignId X-Spread-Engine-Build X-Spread-SpreaderId X-Spread-SubscriberId X-StarScan-Version X-Supplementary-Info X-Suspected-Spam X-Symantec-Mail-Security-Queue-ID X-Symantec-Mail-Security-Sender X-TDHeader X-TFF-CGPSA-Filter X-TFF-CGPSA-Version X-TM-AS-Product-Ver X-TM-AS-Result X-TM-AS-User-Approved-Sender X-TM-AS-User-Blocked-Sender X-TM-ID X-TXN_ID X-To X-UIDL X-Un X-Unsubscribe-Web X-Uri X-User X-VASHLD-SCLID X-VIANETWORKS-Mailtag X-VTX-Services-SA-Queue-ID X-VTX-Services-SA-Sender X-VirtualServer X-VirtualServerGroup X-Virus-Scan X-Virus-Scanned X-Virus-Status X-VirusChecked X-Voqn-Campaign-Uid X-Voqn-Customer-Gid X-Voqn-Customer-Uid X-Voqn-Delivery-Sid X-Voqn-EBS X-Voqn-Mailer X-Voqn-Subscriber-Uid X-Voqn-Tracking-Did X-WSS-ID X-WUM-CCI X-WUM-FROM X-WUM-REPLYTO X-Webmail-Time X-WebmailclientIP X-Wum-Nature X-XB-MSB-MailScanner X-XB-MSB-MailScanner-Information X-XB-MSB-MailScanner-SpamCheck X-XB-MSB-MailScanner-SpamScore X-XS4ALL-To X-XaM3-API-Version X-YMail-OSG X-Yahoo-Forwarded X-Yahoo-Newman-Id X-Yahoo-Newman-Property X-YahooFilteredBulk X-aid X-bmiFolder X-bmifolder X-campaignid X-cid X-client X-clientid X-cloud-security X-cloud-security-Mailarchiv X-cloud-security-Mailarchivtype X-cloud-security-Virusscan X-cloud-security-connect X-cloud-security-disclaimer X-cloud-security-recipient X-cloud-security-sender X-cp3a X-customer X-debug-filepath X-eSafe-Spam-Info X-eSafe-Spam-Methods X-email X-hostedoffice-tnef X-imss-result X-imss-scanInfo X-imss-scores X-imss-settings X-imss-tmaseResult X-imss-version X-mailer X-mailing X-me-spamlevel X-me-spamrating X-mid X-netpoint.co.za-MailScanner X-netpoint.co.za-MailScanner-From X-netpoint.co.za-MailScanner-Information X-netpoint.co.za-MailScanner-SpamScore X-ngMessageSubType X-pstn-levels X-quidnr X-respld X-respTo X-rext X-rpcampaign X-sgxh I X-spam-flag X-szbqf.com

Moderne Email Systeme



Mail **E**xchanger

Sender **P**olicy **F**ramework

SPF:**S**ender **R**ewriting **S**cheme

Domain **K**ey **I**dentified **M**ail

Domain based **M**essage **A**uthentication, **R**eporting and **C**onformance

Public **S**uffix **L**ist

DKIM

SPF

SRS

DMARC

PSL

MTA

MDA

MSA

TLS/STARTTLS

DKIM

SPF

SRS

DMARC

MTA

PSL

MSA

MDA

nginx

LE

Sieve

Server Side Filter Rules

Mailinglisten einsortieren

Weiterleitungen

Urlaubsabwesenheit

Junk lernen

DKIM

SPF

SRS

DMARC

MTA

PSL

MSA

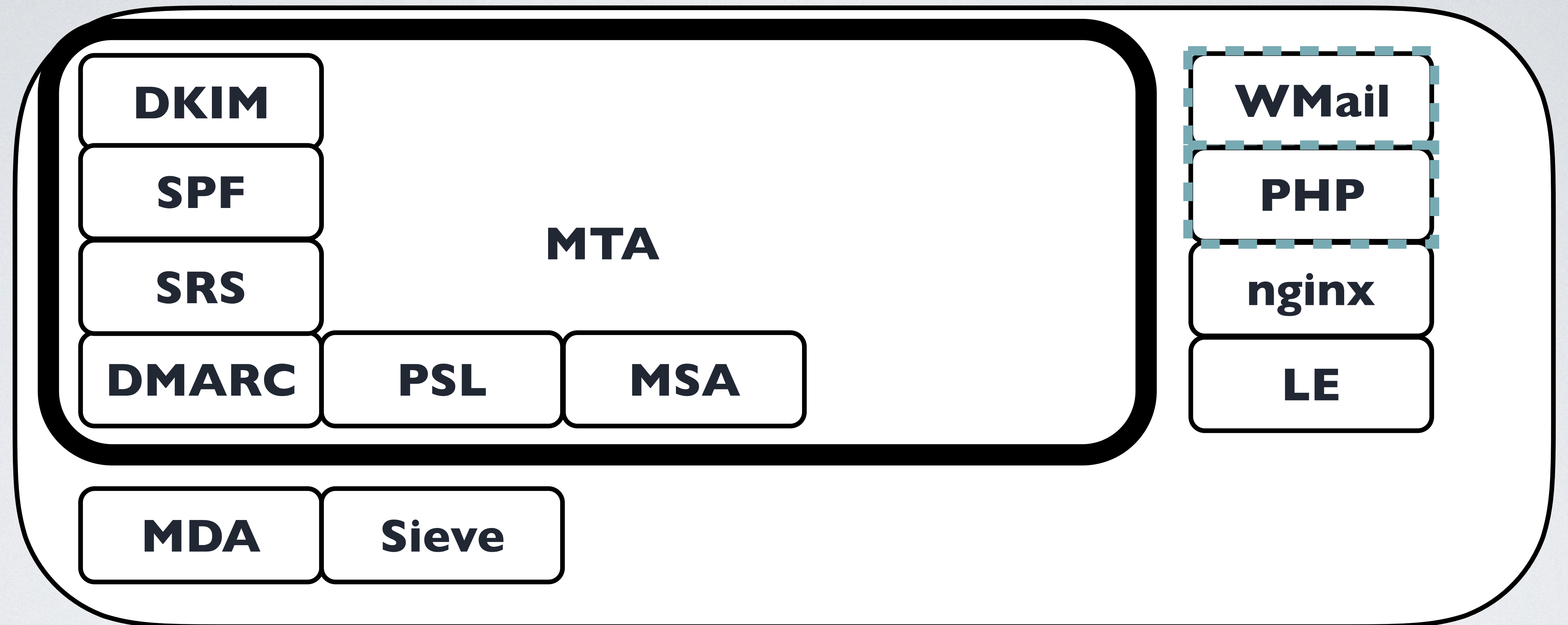
nginx

LE

MDA

Sieve

Webmail



Spam

Billige Abwehrmethoden

Blocklisten

DNSBL, RBL

Gr[ae]ylisting

Whitelisting



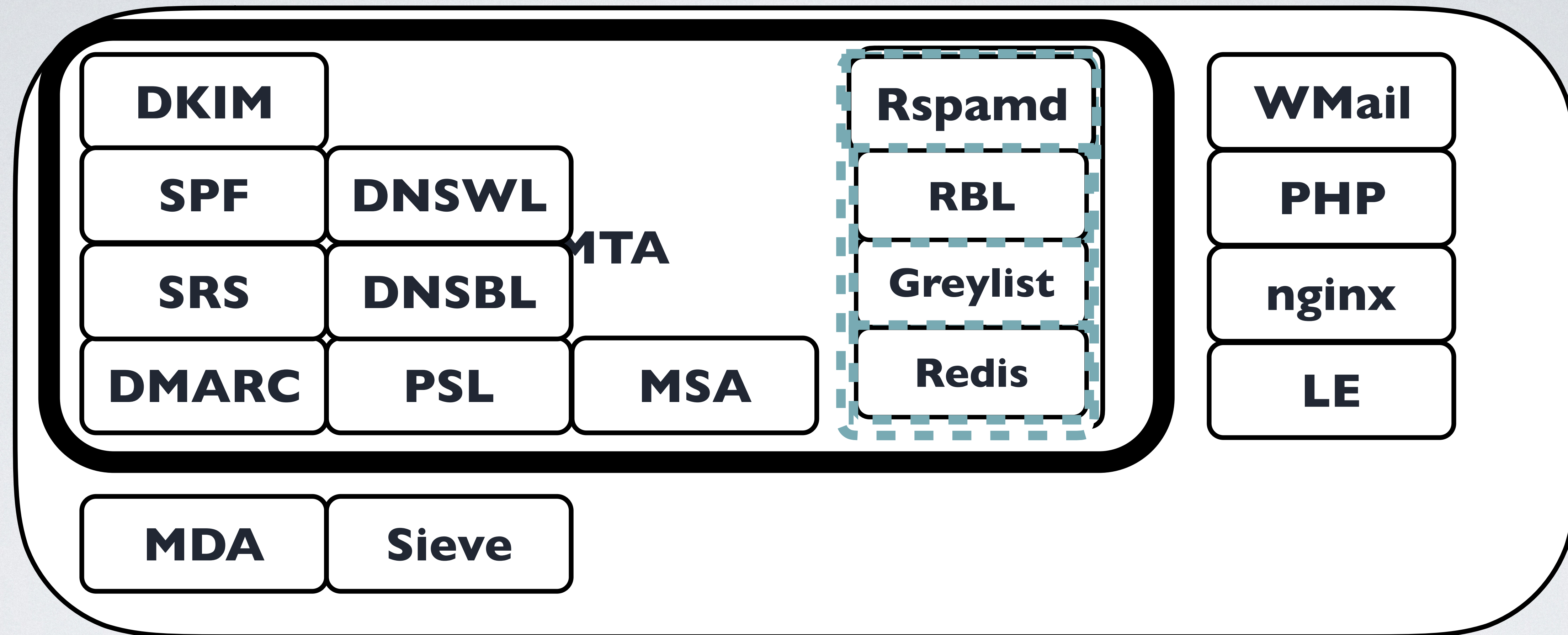
Spam

Die teuren Filter

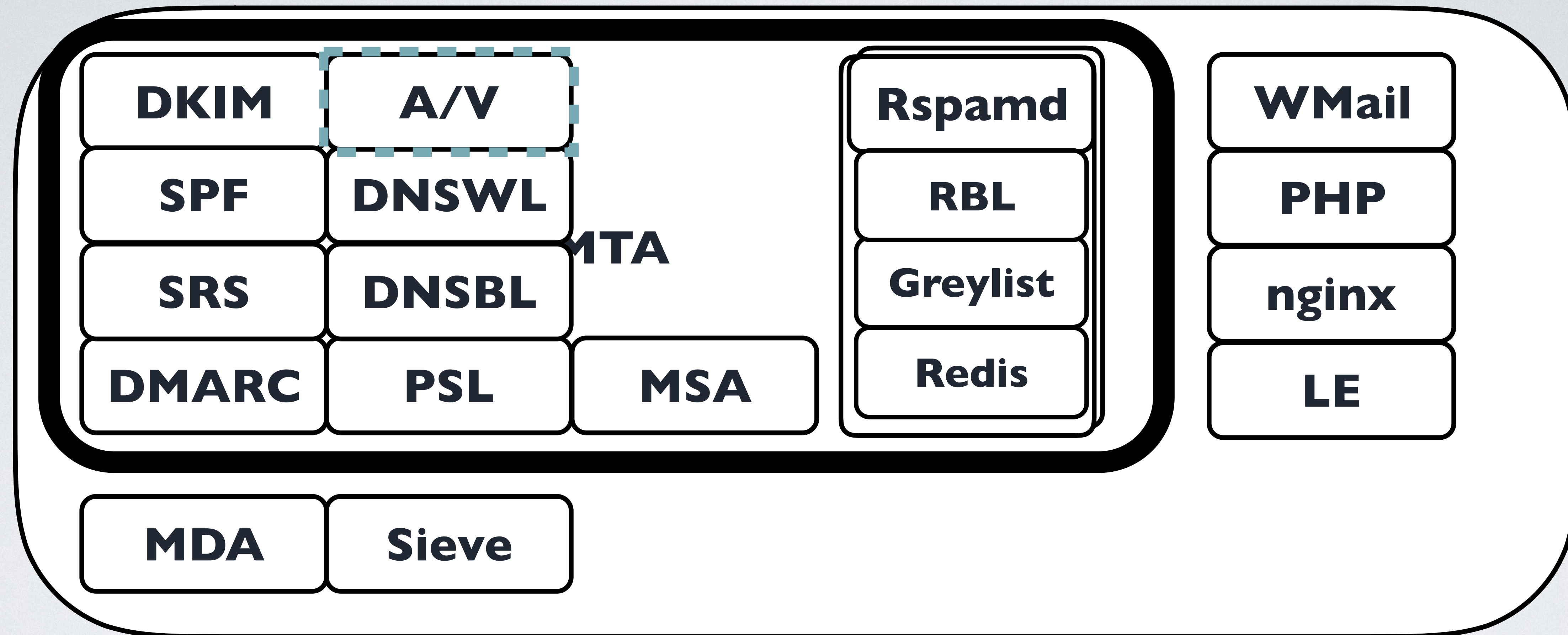
Der kleine Horrorladen

Amavisd-new
SpamAssassin
Razor/Pyzor

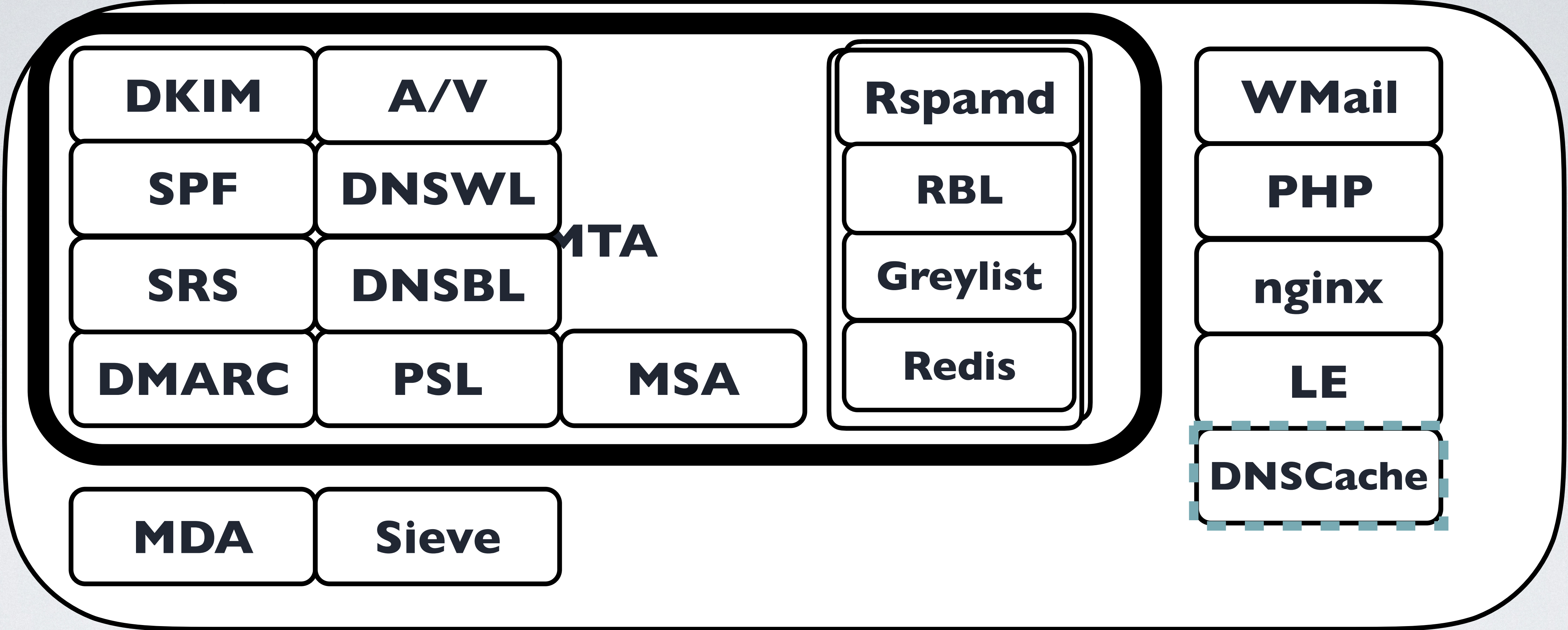
Rspamd



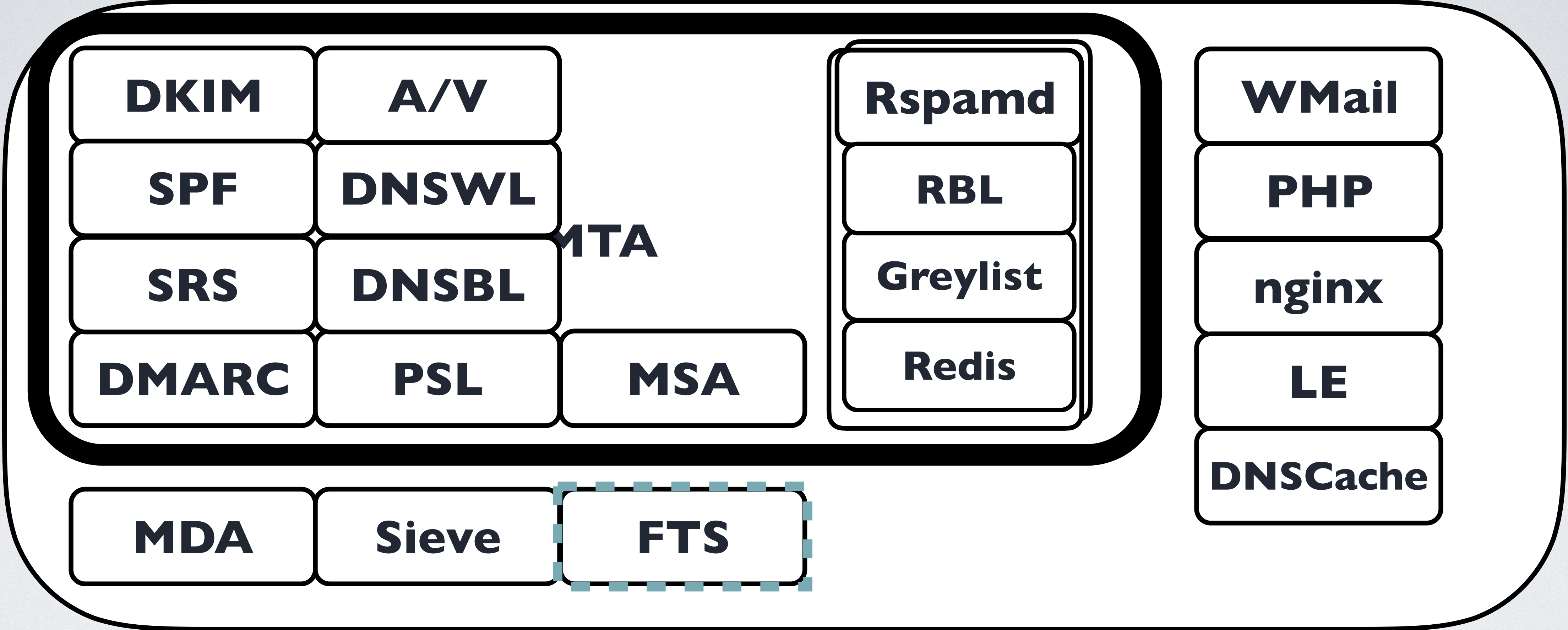
Malware



DNS Cache

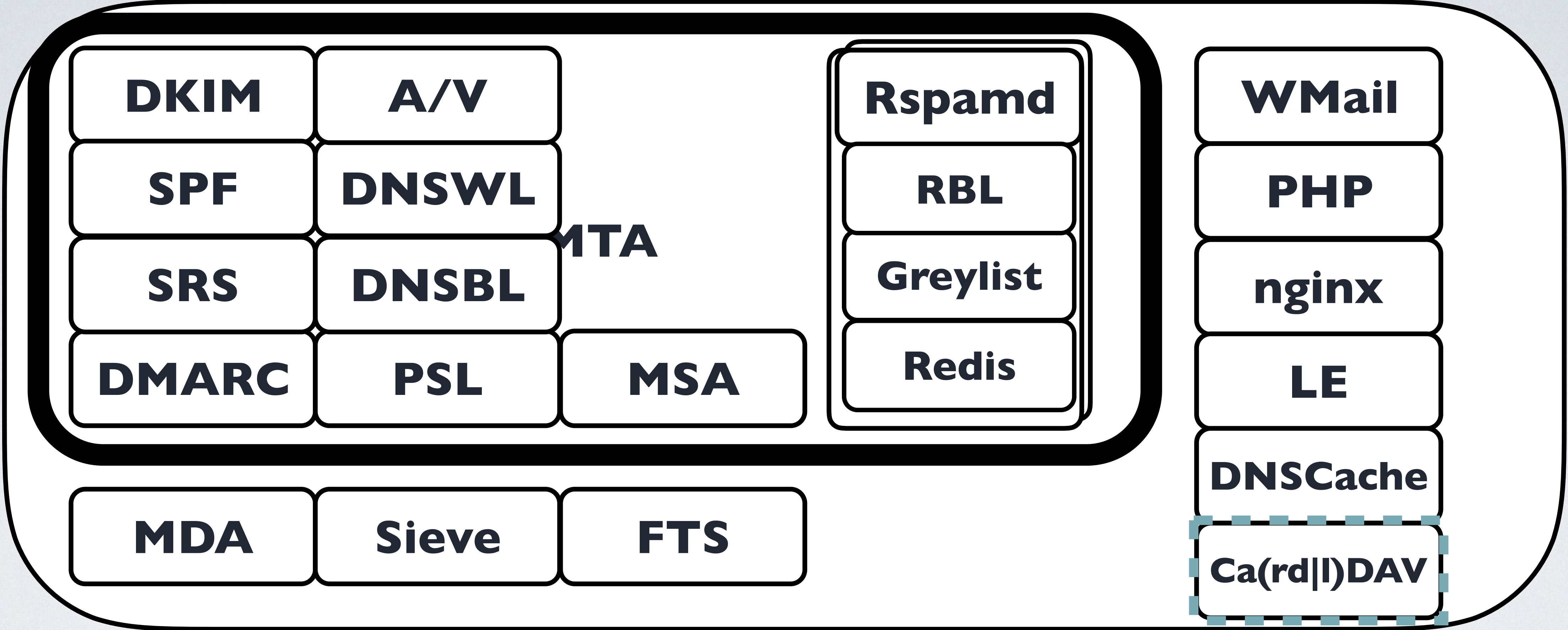


IMAP **F**ull **T**ext **S**earch

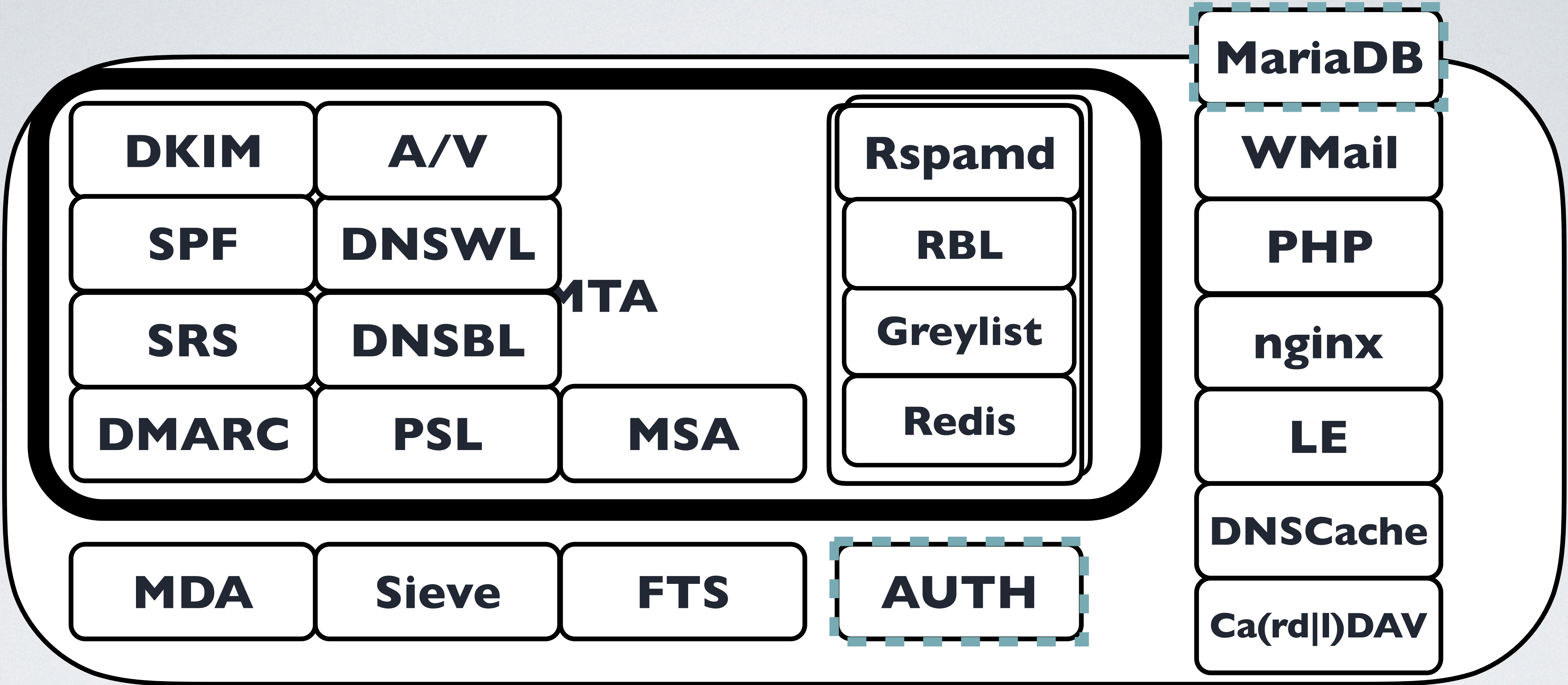


Kontakte

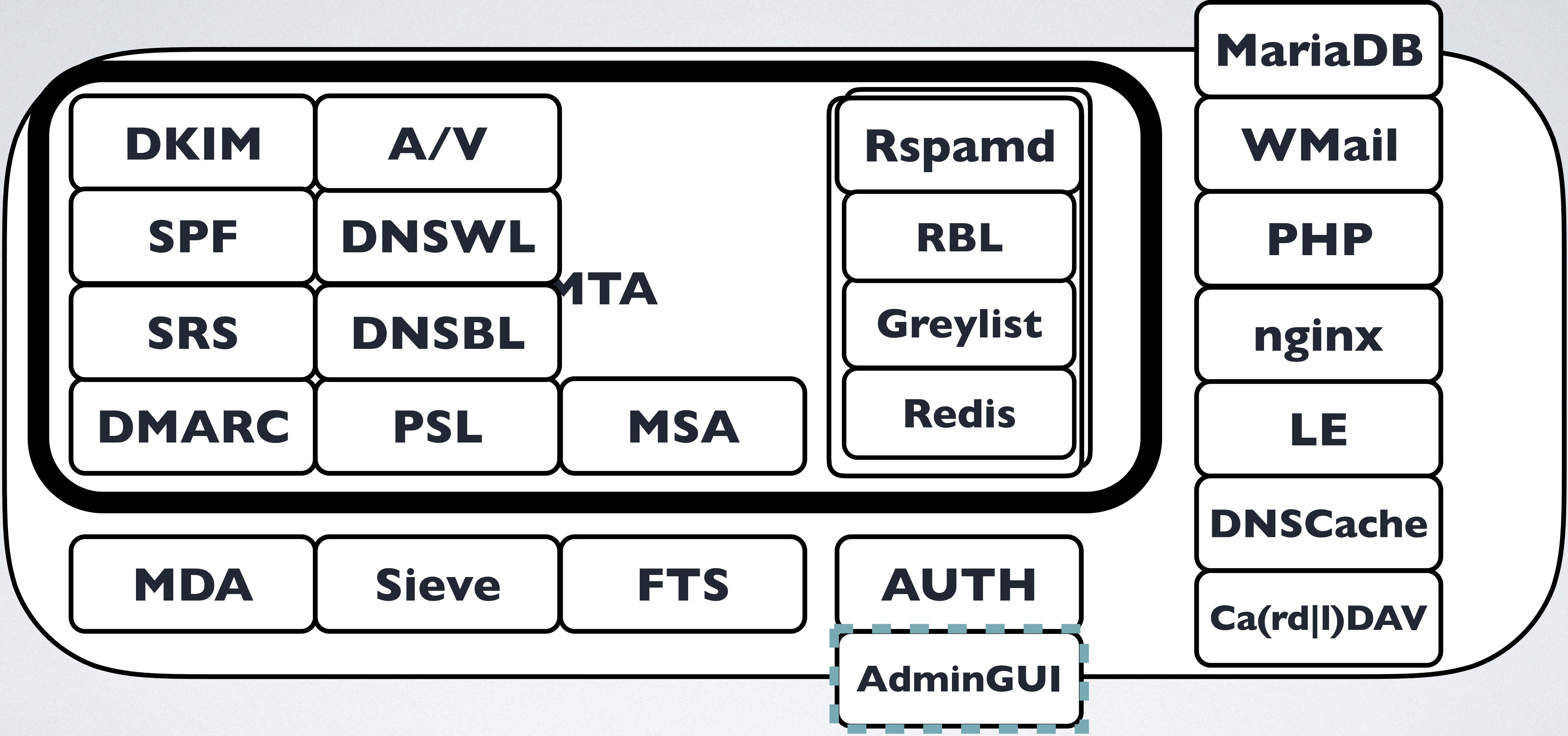
Kalender



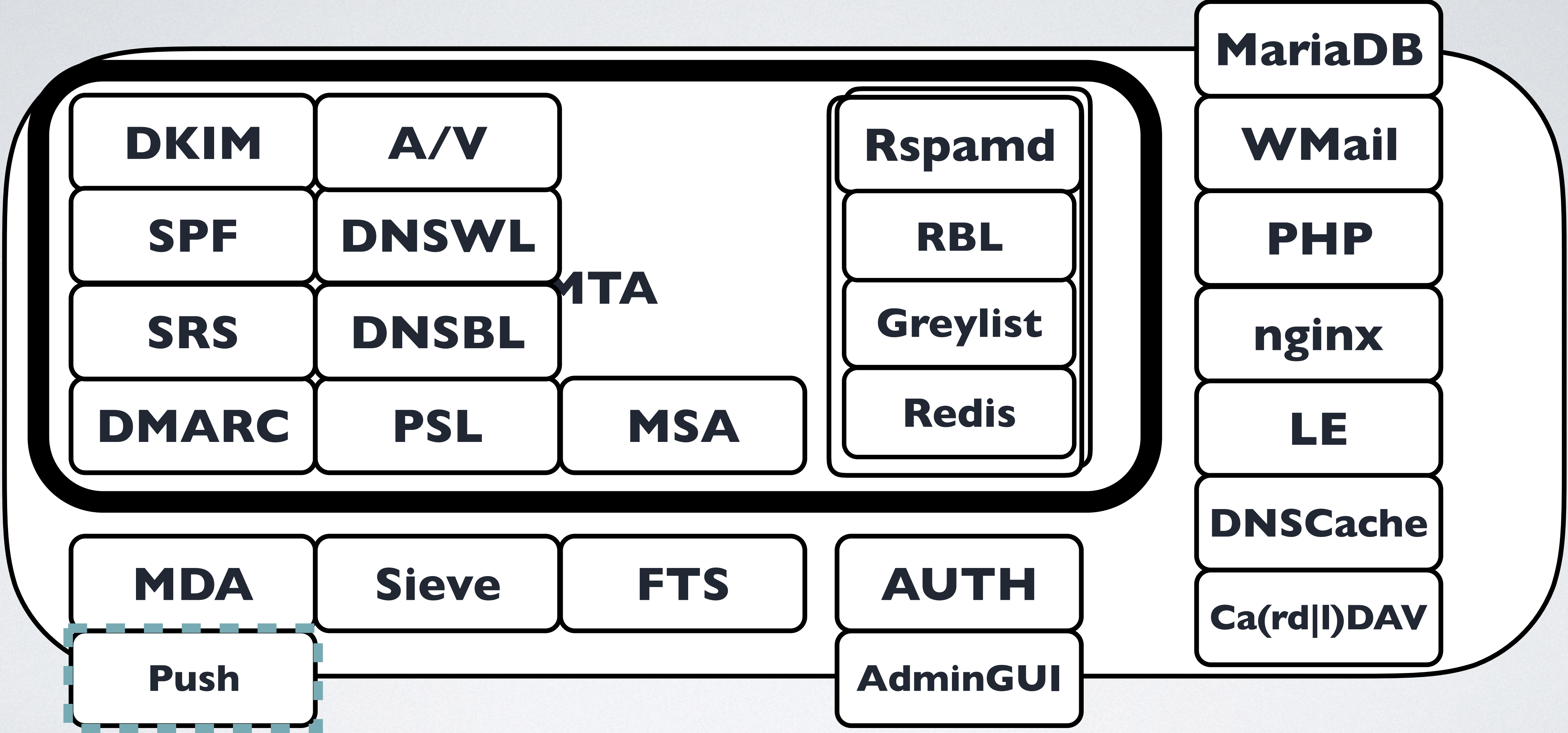
Authentifizierung



Domain Delegation



Push Notifications

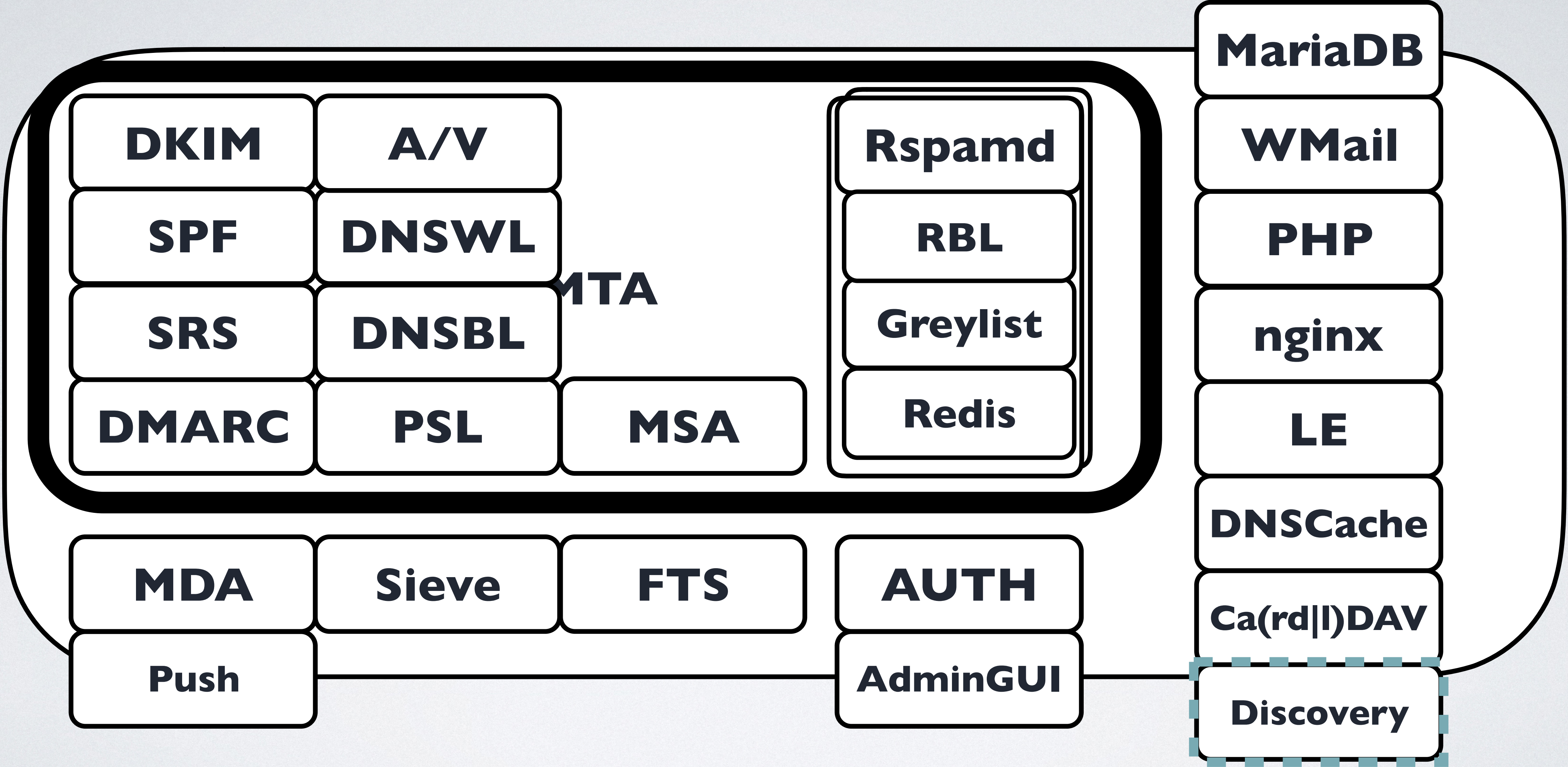


Service Autodiscovery

MUA Autoconfig

RFC 6186

CalDAV/CardDAV Autoconfig



DNSSEC, DANE

Mailinglisten Server

Support Ticket Systeme

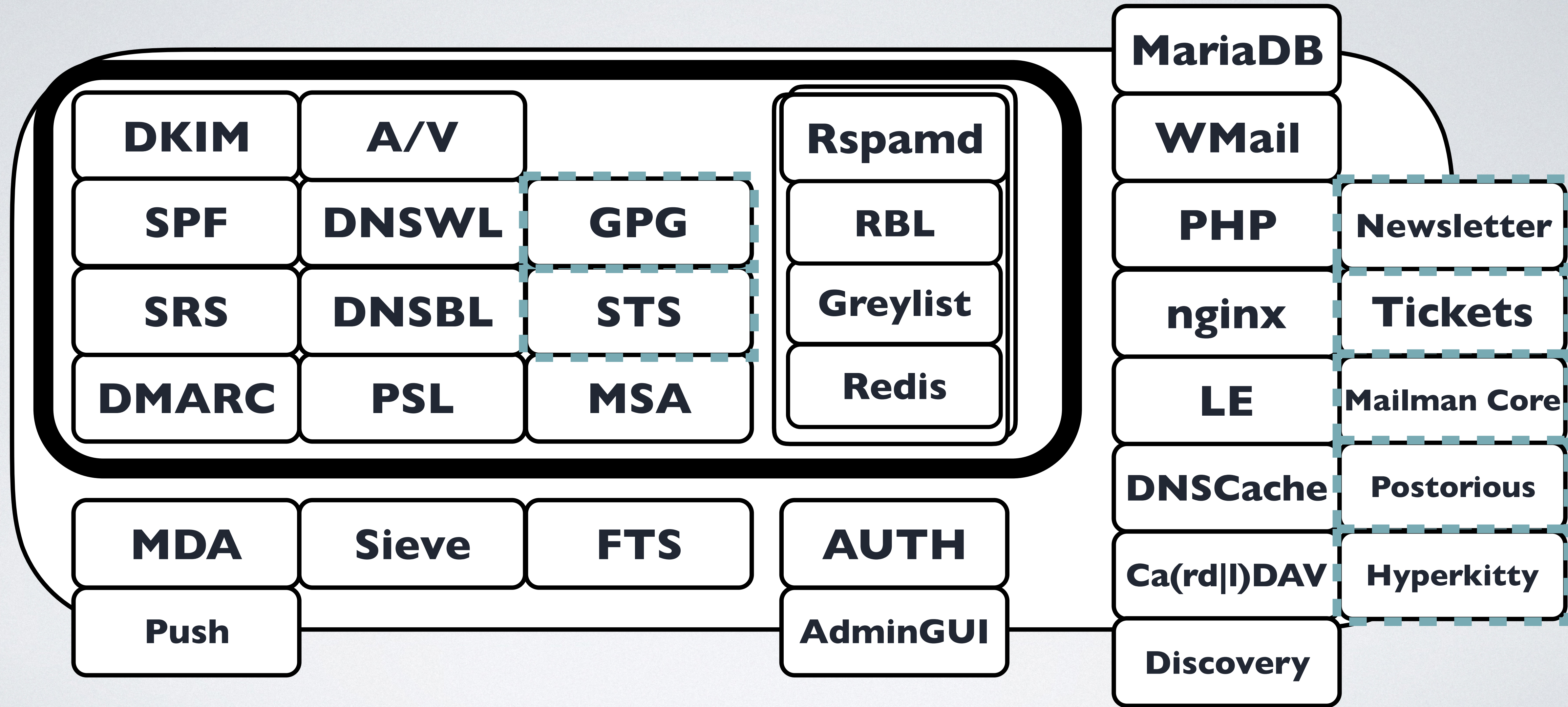
Newsletter Tools

Robo-Clients

MTA-STS

STARTTLS Everywhere
EFF

Authenticated **R**eceived **C**hain



Fazit

Unendlich komplex

Email ist kaputt

Email Reparieren?

IN MX 0 .

Team Null MX

Fragen?

Danke

@MacLemon@chaos.social

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