

# SASLprep Bis

(draft-melnikov-precis-saslprepbis)

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# A Bit of History (I)

- Stringprep (RFC 3454) grew out of work on internationalized domain names (IDNs)
- Mainly used for IDNA2003 (RFC 3490)
- Then re-used by application protocols
- One "customer" was SASLprep (RFC 4013) for both user names and passwords

# A Bit of History (2)

- IDNA2008 does *\*not\** use Stringprep
- Why not?
- Primarily, because stringprep is hardcoded to Unicode 3.2 (now at 6.1)
- Secondarily, because of the "exclusion model" (all code points allowed except for what is explicitly disallowed)

# A Bit of History (3)

- Other stringprep "customers" moving away from stringprep (PRECIS WG)
- Version-agile for Unicode
- Inclusion model (define what's allowed, everything else is disallowed)
- Several string classes, which can be re-used by application protocols

# SASLprep (RFC 4013)

- A single stringprep profile for both usernames and passwords
- Non-ASCII space characters mapped to SP
- Characters "commonly mapped to nothing" are mapped to nothing
- Unicode Normalization Form KC (NFKC)
- Various prohibited output

# User Names, Bis

- Re-use PRECIS NameClass
- Map non-ASCII space to SP
- Map PRECIS "M" class to nothing
- Map uppercase to lowercase
- Normalize with NFC (not NFKC)
- Apply "Bidi rule" from RFC 5893

# Passwords, Bis

- Re-use PRECIS FreeClass
- Map non-ASCII space to SP
- Map PRECIS "M" class to nothing
- No case mapping
- Normalize with NFC (not NFKC)
- Apply "Bidi rule" from RFC 5893

# Open Issues

- Two separate profiles OK?
- Just disallow PRECIS "M" class instead of mapping to nothing?
- Switch from NFKC to NFC? (less strict)
- In passwords, what about codepoints that have compatibility equivalents?