

new/exception_lists/packaging

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*****
28249 Sun Mar 18 01:13:14 2018
new/exception_lists/packaging
1575 untangle libmlrpc ... (packaging)
*****
1 #
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27 # Copyright 2016 Nexenta Systems, Inc.
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29 # Copyright 2017 RackTop Systems.
30 #
31 #
32 #
33 # Exception List for validate_pkg
34 #
35 #
36 #
37 # The following entries are built in the /proto area
38 # but not included in any packages - this is intentional.
39 #
40 usr/include/auth_list.h
41 usr/include/bsm/audit_door_infc.h
42 usr/include/bsm/audit_private.h
43 usr/include/bsm/devalloc.h
44 usr/include/getxby_door.h
45 usr/include/passwdutil.h
46 usr/include/priv_utils.h
47 usr/include/rpcsvc/daemon_utils.h
48 usr/include/rpcsvc/svc_dg_priv.h
49 usr/include/security/pam_impl.h
50 usr/include/sys/clock_impl.h
51 usr/include/sys/winlockio.h
52 usr/include/scsi/plugins/ses/vendor/sun_impl.h
53 #
54 # Private lofi interface.
55 #
56 usr/include/sys/lofi_impl.h
57 #
58 # Private/Internal libraries of the Cryptographic Framework.
59 #
60 lib/libkcf.so
61 lib/liblselfsign

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62 lib/liblselfsign.ln
63 lib/liblselfsign
64 lib/liblselfsign.ln
65 usr/include/liblselfsign.h
66 usr/lib/liblselfsign
67 usr/lib/liblselfsign.ln
68 usr/lib/amd64/liblselfsign          i386
69 usr/lib/sparcv9/liblselfsign       sparc
70 #
71 #
72 # The following files are used by the DHCP service, the
73 # standalone's DHCP implementation, and the kernel (nfs_dlboot).
74 # They contain interfaces which are currently private.
75 #
76 usr/include/dhcp_symbol.h
77 usr/include/sys/sunos_dhcp_class.h
78 #
79 # Private MAC driver header files
80 #
81 usr/include/inet/iptun.h
82 usr/include/sys/aggr_impl.h
83 usr/include/sys/aggr.h
84 usr/include/sys/dld_impl.h
85 usr/include/sys/dld_ioc.h
86 usr/include/sys/dls_impl.h
87 usr/include/sys/dls.h
88 usr/include/sys/mac_client_impl.h
89 usr/include/sys/mac_client.h
90 usr/include/sys/mac_flow_impl.h
91 usr/include/sys/mac_impl.h
92 usr/include/sys/mac_soft_ring.h
93 usr/include/sys/mac_stat.h
94 #
95 # Private GLDv3 userland libraries and headers
96 #
97 usr/include/libdladm_impl.h
98 usr/include/libdlaggr.h
99 usr/include/libdlether.h
100 usr/include/libdlflow_impl.h
101 usr/include/libdlflow.h
102 usr/include/libdliptun.h
103 usr/include/libdlmgmt.h
104 usr/include/libdlsim.h
105 usr/include/libdlstat.h
106 usr/include/libdlvnic.h
107 usr/include/libdlwlan_impl.h
108 usr/include/libdlwlan.h
109 #
110 # Virtual Network Interface Card (VNIC)
111 #
112 usr/include/sys/vnic.h
113 usr/include/sys/vnic_impl.h
114 #
115 # Private libipadm lint library and header files
116 #
117 usr/include/ipadm_ipmgmt.h
118 usr/include/ipadm_ndpd.h
119 usr/include/libipadm.h
120 lib/libipadm
121 lib/libipadm.ln
122 lib/libipadm.so
123 #
124 # Private libsocket header file
125 #
126 usr/include/libsocket_priv.h
127 #

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128 # IKE and IPsec support library exceptions. The IKE support
129 # library contains exclusively private interfaces, as does
130 # libipsecutil. My apologies for the glut of header files here.
131 #
132 usr/include/errfp.h
133 usr/include/ikedoor.h
134 usr/include/ipsec_util.h
135 usr/lib/amd64/libike.so          i386
136 usr/lib/sparcv9/libike.so       sparc
137 usr/lib/libipsecutil.so
138 usr/lib/amd64/libipsecutil.so   i386
139 usr/lib/sparcv9/libipsecutil.so sparc
140 usr/lib/l1ib-like
141 usr/lib/l1ib-like.ln
142 usr/lib/amd64/l1ib-like.ln     i386
143 usr/lib/sparcv9/l1ib-like.ln   sparc
144 usr/lib/l1ib-lipsecutil
145 usr/lib/l1ib-lipsecutil.ln
146 usr/lib/amd64/l1ib-lipsecutil.ln i386
147 usr/lib/sparcv9/l1ib-lipsecutil.ln sparc
148 #
149 usr/include/inet/ip_impl.h
150 usr/include/inet/ip_ndp.h
151 usr/include/inet/ip2mac_impl.h
152 usr/include/inet/ip2mac.h
153 usr/include/inet/rawip_impl.h
154 usr/include/inet/tcp_impl.h
155 usr/include/inet/udp_impl.h
156 usr/include/libmail.h
157 usr/include/libnwam_priv.h
158 usr/include/protocols/ripngd.h
159 usr/include/s_string.h
160 usr/include/sys/logindmux_impl.h
161 usr/include/sys/vgareg.h
162 #
163 # Some IPsec headers can't be shipped lest we hit export controls...
164 #
165 usr/include/inet/ipsec_impl.h
166 usr/include/inet/ipsec_info.h
167 usr/include/inet/ipsecah.h
168 usr/include/inet/ipsecesp.h
169 usr/include/inet/keysock.h
170 usr/include/inet/sadb.h
171 usr/include/sys/sha1_consts.h
172 usr/include/sys/sha2_consts.h
173 #
174 #
175 # Filtering out directories not shipped
176 #
177 usr/4lib          i386
178 #
179 # These files contain definitions shared privately between the kernel
180 # and libc. There is no reason for them to be part of a package that
181 # a customer should ever see. They are installed in the proto area by
182 # the uts build because libc and other components, like truss, are
183 # dependent upon their contents and should not have their own copies.
184 #
185 usr/include/sys/libc_kernel.h
186 usr/include/sys/synch32.h
187 #
188 # Private interfaces for libdisasm
189 #
190 usr/include/libdisasm.h
191 usr/lib/l1ib-ldisasm
192 usr/lib/l1ib-ldisasm.ln
193 usr/lib/amd64/l1ib-ldisasm.ln   i386

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194 usr/lib/sparcv9/l1ib-ldisasm.ln   sparc
195 #
196 # Private interfaces for libraidcfg
197 #
198 usr/include/raidcfg_spi.h
199 usr/include/raidcfg.h
200 usr/lib/libraidcfg.so
201 usr/lib/amd64/libraidcfg.so       i386
202 usr/lib/sparcv9/libraidcfg.so     sparc
203 usr/lib/l1ib-lraidcfg
204 usr/lib/l1ib-lraidcfg.ln
205 usr/lib/amd64/l1ib-lraidcfg.ln     i386
206 usr/lib/sparcv9/l1ib-lraidcfg.ln   sparc
207 #
208 # This file is used for private communication between mdb, drv/kmdb, and
209 # misc/kmdb. The interfaces described herein are not intended for customer
210 # use, and are thus excluded from packaging.
211 #
212 usr/include/sys/kmdb.h
213 #
214 # These files are installed in the proto area by the build of libdhcpagent
215 # and libdhcputil for the benefit of DHCP-related networking commands such
216 # as dhcpagent, dhcpcinfo, ifconfig, and netstat. These are not interfaces
217 # for customer use, so the files are excluded from packaging.
218 #
219 lib/libdhcpagent.so
220 lib/libdhcputil.so
221 lib/amd64/libdhcputil.so          i386
222 lib/sparcv9/libdhcputil.so       sparc
223 lib/l1ib-ldhcpagent
224 lib/l1ib-ldhcpagent.ln
225 lib/l1ib-ldhcputil
226 lib/l1ib-ldhcputil.ln
227 lib/amd64/l1ib-ldhcputil.ln     i386
228 lib/sparcv9/l1ib-ldhcputil.ln   sparc
229 usr/include/dhcp_hostconf.h
230 usr/include/dhcp_impl.h
231 usr/include/dhcp_inittab.h
232 usr/include/dhcp_stable.h
233 usr/include/dhcp_symbol_common.h
234 usr/include/dhcpagent_ipc.h
235 usr/include/dhcpagent_util.h
236 usr/include/dhcpmsg.h
237 usr/lib/libdhcpagent.so
238 usr/lib/libdhcputil.so
239 usr/lib/amd64/libdhcputil.so     i386
240 usr/lib/sparcv9/libdhcputil.so   sparc
241 usr/lib/l1ib-ldhcpagent
242 usr/lib/l1ib-ldhcpagent.ln
243 usr/lib/l1ib-ldhcputil
244 usr/lib/l1ib-ldhcputil.ln
245 usr/lib/amd64/l1ib-ldhcputil.ln i386
246 usr/lib/sparcv9/l1ib-ldhcputil.ln sparc
247 #
248 # These files are installed in the proto area by the build of libinstzones
249 # and libpkg
250 #
251 usr/lib/l1ib-linstzones
252 usr/lib/l1ib-linstzones.ln
253 usr/lib/amd64/l1ib-linstzones.ln i386
254 usr/lib/sparcv9/l1ib-linstzones.ln sparc
255 usr/lib/l1ib-lpkg
256 usr/lib/l1ib-lpkg.ln
257 #
258 # Don't ship header files private to libipmp and in.mpathd
259 #

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260 usr/include/ipmp_query_impl.h
261 #
262 # These files are installed in the proto area by the build of libinetsvc,
263 # an inetd-specific library shared by inetd, inetadm and inetconv. Only
264 # the shared object is shipped.
265 #
266 usr/include/inetsvc.h
267 usr/lib/libinetsvc.so
268 usr/lib/llib-libinetsvc
269 usr/lib/llib-libinetsvc.ln
270 #
271 # These files are installed in the proto area by the build of libinetutil,
272 # a general purpose library for the benefit of internet utilities. Only
273 # the shared object is shipped.
274 #
275 lib/libinetutil.so
276 lib/amd64/libinetutil.so          i386
277 lib/sparcv9/libinetutil.so       sparc
278 lib/llib-libinetutil
279 lib/llib-libinetutil.ln
280 lib/amd64/llib-libinetutil.ln   i386
281 lib/sparcv9/llib-libinetutil.ln sparc
282 usr/include/libinetutil.h
283 usr/include/netinet/inetutil.h
284 usr/include/ofmt.h
285 usr/lib/libinetutil.so
286 usr/lib/amd64/libinetutil.so     i386
287 usr/lib/sparcv9/libinetutil.so   sparc
288 usr/lib/llib-libinetutil
289 usr/lib/llib-libinetutil.ln
290 usr/lib/amd64/llib-libinetutil.ln i386
291 usr/lib/sparcv9/llib-libinetutil.ln sparc
292 #
293 # Miscellaneous kernel interfaces or kernel<->user interfaces that are
294 # consolidation private and we do not want to export at this time.
295 #
296 usr/include/sys/cryptmod.h
297 usr/include/sys/dumpadm.h
298 usr/include/sys/ontrap.h
299 usr/include/sys/sysmsg_impl.h
300 usr/include/sys/vlan.h
301 #
302 # non-public pci header
303 #
304 usr/include/sys/pci_impl.h
305 usr/include/sys/pci_tools.h
306 #
307 # Exception list for RCM project, included by librcm and rcm_daemon
308 #
309 usr/include/librcm_event.h
310 usr/include/librcm_impl.h
311 #
312 # MDB deliverables that are not yet public
313 #
314 usr/lib/mdb/proc/mdb_test.so
315 usr/lib/mdb/proc/sparcv9/mdb_test.so  sparc
316 #
317 # SNCA project exception list
318 #
319 usr/include/inet/kssl/kssl.h
320 usr/include/inet/kssl/ksslimpl.h
321 usr/include/inet/kssl/ksslproto.h
322 usr/include/inet/nca
323 #
324 # these are "removed" from the source product build because the only
325 # packages that currently deliver them are removed.

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326 # they really should't be in here.
327 #
328 etc/sfw
329 #
330 # Entries for the libmech_krb5 symlink, which has been included
331 # for build purposes only, not delivered to customers.
332 #
333 usr/include/gssapi/gssapi_krb5.h
334 usr/lib/gss/libmech_krb5.so
335 usr/lib/amd64/gss/libmech_krb5.so      i386
336 usr/lib/sparcv9/gss/libmech_krb5.so   sparc
337 usr/lib/libmech_krb5.so
338 usr/lib/amd64/libmech_krb5.so         i386
339 usr/lib/sparcv9/libmech_krb5.so       sparc
340 #
341 # Entries for headers from efcodes project which user does not need to see
342 #
343 usr/platform/sun4u/include/sys/fc_plat.h          sparc
344 usr/platform/sun4u/include/sys/fcode.h           sparc
345 #
346 # Private net80211 headers
347 #
348 usr/include/sys/net80211_amrr.h
349 usr/include/sys/net80211_crypto.h
350 usr/include/sys/net80211_ht.h
351 usr/include/sys/net80211_proto.h
352 usr/include/sys/net80211.h
353 #
354 usr/include/net/wpa.h
355 #
356 # PPPoE files not delivered to customers.
357 #
358 usr/include/net/pppoe.h
359 usr/include/net/sppptun.h
360 #
361 # Simnet
362 #
363 usr/include/net/simnet.h
364 #
365 # Bridging internal data structures
366 #
367 usr/include/net/bridge_impl.h
368 #
369 # User<->kernel interface used by cfgadm/USB only
370 #
371 usr/include/sys/usb/hubd/hubd_impl.h
372 #
373 # User<->kernel interface used by cfgadm/SATA only
374 #
375 usr/include/sys/sata/sata_cfgadm.h          i386
376 #
377 # Private ucred kernel header
378 #
379 usr/include/sys/ucred.h
380 #
381 # Private and/or platform-specific smf(5) files
382 #
383 lib/librestart.so
384 lib/llib-lrestart
385 lib/llib-lrestart.ln
386 lib/amd64/llib-lrestart.ln                i386
387 lib/sparcv9/llib-lrestart.ln             sparc
388 usr/include/libcontract_priv.h
389 usr/include/librestart_priv.h
390 usr/include/librestart.h
391 usr/lib/librestart.so

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392 usr/lib/sparcv9/librestart.so          sparc
393 lib/svc/manifest/platform/sun4u       i386
394 lib/svc/manifest/platform/sun4v       i386
395 var/svc/manifest/platform/sun4u       i386
396 var/svc/manifest/platform/sun4v       i386
397 etc/svc/profile/platform_sun4v.xml     i386
398 etc/svc/profile/platform_SUNW,SPARC-Enterprise.xml i386
399 etc/svc/profile/platform_SUNW,Sun-Fire-15000.xml i386
400 etc/svc/profile/platform_SUNW,Sun-Fire-880.xml i386
401 etc/svc/profile/platform_SUNW,Sun-Fire-V890.xml i386
402 etc/svc/profile/platform_SUNW,Sun-Fire.xml i386
403 etc/svc/profile/platform_SUNW,Ultra-Enterprise-10000.xml i386
404 etc/svc/profile/platform_SUNW,UltraSPARC-IIe-NetraCT-40.xml i386
405 etc/svc/profile/platform_SUNW,UltraSPARC-IIe-NetraCT-60.xml i386
406 etc/svc/profile/platform_SUNW,UltraSPARC-IIi-Netract.xml i386
407 #
408 # Private libuutil files
409 #
410 lib/libuutil.so
411 lib/llib-luutil
412 lib/llib-luutil.ln
413 lib/sparcv9/llib-luutil.ln             sparc
414 usr/include/libuutil_impl.h
415 usr/lib/libuutil.so
416 usr/lib/sparcv9/libuutil.so           sparc
417 #
418 # Private Multidata file.
419 #
420 usr/include/sys/multidata_impl.h
421 #
422 # Even though all the objects built under usr/src/stand are later glommed
423 # together into a couple of second-stage boot loaders, we dump the static
424 # archives and lint libraries into $(ROOT)/stand for intermediate use
425 # (e.g., for lint, linking the second-stage boot loaders, ...). Since
426 # these are merely intermediate objects, they do not need to be packaged.
427 #
428 stand                                  sparc
429 #
430 # Private KCF header files
431 #
432 usr/include/sys/crypto/elfsign.h
433 usr/include/sys/crypto/impl.h
434 usr/include/sys/crypto/ops_impl.h
435 usr/include/sys/crypto/sched_impl.h
436 #
437 # The following files are installed in the proto area
438 # by the build of libcmdutils (Command Utilities Library).
439 # libcmdutils contains interfaces which are all private interfaces.
440 #
441 lib/libcmdutils.so
442 lib/amd64/libcmdutils.so                i386
443 lib/sparcv9/libcmdutils.so             sparc
444 lib/llib-lcmdutils
445 lib/llib-lcmdutils.ln
446 lib/amd64/llib-lcmdutils.ln           i386
447 lib/sparcv9/llib-lcmdutils.ln         sparc
448 usr/include/libcmdutils.h
449 usr/lib/libcmdutils.so
450 usr/lib/amd64/libcmdutils.so            i386
451 usr/lib/sparcv9/libcmdutils.so         sparc
452 usr/lib/llib-lcmdutils
453 usr/lib/llib-lcmdutils.ln
454 usr/lib/amd64/llib-lcmdutils.ln       i386
455 usr/lib/sparcv9/llib-lcmdutils.ln     sparc
456 #
457 # Private interfaces in libsec

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458 #
459 usr/include/aclutils.h
460 #
461 # USB skeleton driver stays in sync with the rest of USB but doesn't ship.
462 #
463 kernel/drv/amd64/usbskel                i386
464 kernel/drv/sparcv9/usbskel              sparc
465 kernel/drv/usbskel.conf
466 #
467 # Consolidation and Sun private libdevid interfaces
468 # Public libdevid interfaces provided by devid.h
469 #
470 usr/include/sys/libdevid.h
471 #
472 # The following files are installed in the proto area by the build of
473 # libprtdiag. libprtdiag contains interfaces which are all private.
474 # Only the shared object is shipped.
475 #
476 usr/platform/sun4u/lib/llib-lprtdiag    sparc
477 usr/platform/sun4u/lib/llib-lprtdiag.ln sparc
478 usr/platform/sun4v/lib/llib-lprtdiag.ln sparc
479 #
480 # The following files are installed in the proto area by the build of
481 # mdesc driver in sun4v. These header files are used on in the build
482 # and do not need to be shipped to customers.
483 #
484 usr/include/sys/mdesc.h                  sparc
485 usr/include/sys/mdesc_impl.h            sparc
486 usr/platform/sun4v/include/sys/mach_descrip.h sparc
487 #
488 # The following files are installed in the proto area by the build of
489 # libpcp. libpcp contains interfaces which are all private.
490 # Only the shared object is shipped.
491 #
492 usr/platform/sun4v/lib/llib-lpcp.ln      sparc
493 usr/platform/SUNW,Netra-CP3060/lib/llib-lpcp.ln sparc
494 usr/platform/SUNW,Netra-CP3260/lib/llib-lpcp.ln sparc
495 usr/platform/SUNW,Netra-T5220/lib/llib-lpcp.ln sparc
496 usr/platform/SUNW,Netra-T5440/lib/llib-lpcp.ln sparc
497 usr/platform/SUNW,SPARC-Enterprise-T5120/lib/llib-lpcp.ln sparc
498 usr/platform/SUNW,Sun-Blade-T6300/lib/llib-lpcp.ln sparc
499 usr/platform/SUNW,Sun-Blade-T6320/lib/llib-lpcp.ln sparc
500 usr/platform/SUNW,Sun-Fire-T200/lib/llib-lpcp.ln sparc
501 usr/platform/SUNW,T5140/lib/llib-lpcp.ln sparc
502 usr/platform/SUNW,USBRDT-5240/lib/llib-lpcp.ln sparc
503 #
504 # ZFS internal tools and lint libraries
505 #
506 usr/lib/llib-lzfs_jni
507 usr/lib/llib-lzfs_jni.ln
508 usr/lib/amd64/llib-lzfs_jni.ln         i386
509 usr/lib/sparcv9/llib-lzfs_jni.ln      sparc
510 usr/lib/llib-lzpool
511 usr/lib/llib-lzpool.ln                 i386
512 usr/lib/amd64/llib-lzpool.ln           i386
513 usr/lib/sparcv9/llib-lzpool.ln        sparc
514 #
515 # ZFS JNI headers
516 #
517 usr/include/libzfs_jni_dataset.h
518 usr/include/libzfs_jni_disk.h
519 usr/include/libzfs_jni_diskmgmt.h
520 usr/include/libzfs_jni_ipool.h
521 usr/include/libzfs_jni_main.h
522 usr/include/libzfs_jni_pool.h
523 usr/include/libzfs_jni_property.h

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524 usr/include/libzfs_jni_util.h
525 #
526 # These files are installed in the proto area for Solaris scsi_vhci driver
527 # (for MPAPI support) and should not be shipped
528 #
529 usr/include/sys/scsi/adapters/mpapi_impl.h
530 usr/include/sys/scsi/adapters/mpapi_scsi_vhci.h
531 #
532 # This library is installed in the proto area by the build of libdisasm, and is
533 # only used when building the KMDB disasm module.
534 #
535 usr/lib/libstanddisasm.so
536 usr/lib/amd64/libstanddisasm.so          i386
537 usr/lib/sparcv9/libstanddisasm.so      sparc
538 #
539 # TSol: tsol doesn't ship lint source, and tsnet isn't for customers at all.
540 #
541 lib/libtsnet.so
542 usr/lib/lib-ltsnet
543 usr/lib/lib-ltsol
544 #
545 # nss interfaces shared between libnsl and other ON libraries.
546 #
547 usr/include/nss.h
548 #
549 # AT&T AST (ksh93) files which are currently needed only to build OS/Net
550 # (msgcc&co.)
551 # libast
552 usr/lib/libast.so
553 usr/lib/amd64/libast.so                  i386
554 usr/lib/sparcv9/libast.so               sparc
555 usr/lib/lib-last
556 usr/lib/lib-last.ln
557 usr/lib/amd64/lib-last.ln              i386
558 usr/lib/sparcv9/lib-last.ln            sparc
559 # libcmd
560 usr/lib/lib-lcmd
561 usr/lib/lib-lcmd.ln
562 usr/lib/amd64/lib-lcmd.ln              i386
563 usr/lib/sparcv9/lib-lcmd.ln            sparc
564 # libdll
565 usr/lib/libdll.so
566 usr/lib/amd64/libdll.so                 i386
567 usr/lib/sparcv9/libdll.so               sparc
568 usr/lib/lib-ldll
569 usr/lib/lib-ldll.ln
570 usr/lib/amd64/lib-ldll.ln              i386
571 usr/lib/sparcv9/lib-ldll.ln            sparc
572 # libpp (a helper library needed by AST's msgcc)
573 usr/lib/libpp.so
574 usr/lib/lib-lpp
575 usr/lib/lib-lpp.ln
576 usr/lib/locale/C/LC_MESSAGES/libpp
577 # libshell
578 usr/lib/libshell.so
579 usr/lib/amd64/libshell.so               i386
580 usr/lib/sparcv9/libshell.so            sparc
581 usr/lib/lib-lshell
582 usr/lib/lib-lshell.ln
583 usr/lib/amd64/lib-lshell.ln            i386
584 usr/lib/sparcv9/lib-lshell.ln          sparc
585 # libsum
586 usr/lib/libsum.so
587 usr/lib/amd64/libsum.so                  i386
588 usr/lib/sparcv9/libsum.so               sparc
589 usr/lib/lib-lsum

```

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```

590 usr/lib/lib-lsum.ln
591 usr/lib/amd64/lib-lsum.ln              i386
592 usr/lib/sparcv9/lib-lsum.ln           sparc
593 #
594 # This file is used in ON to build DSCP clients. It is not for customers.
595 #
596 usr/include/libdscp.h                   sparc
597 #
598 # These files are used by the iSCSI Target and the iSCSI Initiator
599 #
600 usr/include/sys/iscsi_protocol.h
601 usr/include/sys/iscsi_authclient.h
602 usr/include/sys/iscsi_authclientglue.h
603 #
604 # These files are used by the COMSTAR iSCSI target port provider
605 #
606 usr/include/sys/idm
607 usr/include/sys/iscsit/chap.h
608 usr/include/sys/iscsit/iscsi_if.h
609 usr/include/sys/iscsit/isns_protocol.h
610 usr/include/sys/iscsit/radius_packet.h
611 usr/include/sys/iscsit/radius_protocol.h
612 #
613 # libshare is private and the 64-bit sharemgr is not delivered.
614 #
615 usr/lib/libshare.so
616 usr/lib/amd64/libshare.so               i386
617 usr/lib/sparcv9/libshare.so            sparc
618 usr/lib/fs/autofs/libshare_autofs.so
619 usr/lib/fs/autofs/amd64/libshare_autofs.so i386
620 usr/lib/fs/autofs/sparcv9/libshare_autofs.so sparc
621 usr/lib/fs/nfs/libshare_nfs.so
622 usr/lib/fs/nfs/amd64/libshare_nfs.so    i386
623 usr/lib/fs/nfs/sparcv9/libshare_nfs.so  sparc
624 usr/lib/fs/nfs/test_svc_tp_create
625 usr/lib/fs/smb/libshare_smb.so
626 usr/lib/fs/smb/amd64/libshare_smb.so    i386
627 usr/lib/fs/smb/sparcv9/libshare_smb.so  sparc
628 usr/lib/fs/smbfs/libshare_smbfs.so
629 usr/lib/fs/smbfs/amd64/libshare_smbfs.so i386
630 usr/lib/fs/smbfs/sparcv9/libshare_smbfs.so sparc
631 usr/include/libshare_impl.h
632 usr/include/scfutil.h
633 #
634 # These files are installed in the proto area by the build of libpri for
635 # the benefit of the builds of FMA libldom, Zeus, picld plugins, and/or
636 # other libpri consumers. However, the libpri interfaces are private to
637 # Sun (Consolidation Private) and not intended for customer use. So these
638 # files (the symlink and the lint library) are excluded from packaging.
639 #
640 usr/lib/libpri.so                       sparc
641 usr/lib/lib-lpri                         sparc
642 usr/lib/lib-lpri.ln                      sparc
643 usr/lib/sparcv9/libpri.so                sparc
644 usr/lib/sparcv9/lib-lpri.ln              sparc
645 #
646 # These files are installed in the proto area by the build of libds for
647 # the benefit of the builds of sun4v IO FMA and/or other libds
648 # consumers. However, the libds interfaces are private to Sun
649 # (Consolidation Private) and not intended for customer use. So these
650 # files (the symlink and the lint library) are excluded from packaging.
651 #
652 usr/lib/libds.so                         sparc
653 usr/lib/sparcv9/libds.so                  sparc
654 usr/lib/lib-lds                           sparc
655 usr/lib/lib-lds.ln                       sparc

```

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```

656 usr/lib/sparcv9/llib-lds.ln          sparcc
657 usr/lib/libdscfg.so
658 usr/lib/llib-ldscfg.ln
659 usr/platform/sun4v/include/sys/libds.h sparcc
660 usr/platform/sun4v/include/sys/vlds.h sparcc
661 #
662 # Private/Internal u8_textprep header file. Do not ship.
663 #
664 usr/include/sys/u8_textprep_data.h
665 #
666 # SQLite is private, used by SMF (svc.configd), idmapd and libsmb.
667 #
668 usr/include/sqlite-sys
669 lib/libsqlite-native.o
670 lib/libsqlite-sys.so
671 lib/llib-lsqlite-sys
672 lib/llib-lsqlite-sys.ln
673 #
674 # Private/Internal kiconv header files. Do not ship.
675 #
676 usr/include/sys/kiconv_big5_utf8.h
677 usr/include/sys/kiconv_ck_common.h
678 usr/include/sys/kiconv_cp950hkscs_utf8.h
679 usr/include/sys/kiconv_emeal.h
680 usr/include/sys/kiconv_emea2.h
681 usr/include/sys/kiconv_euckr_utf8.h
682 usr/include/sys/kiconv_euctw_utf8.h
683 usr/include/sys/kiconv_gb18030_utf8.h
684 usr/include/sys/kiconv_gb2312_utf8.h
685 usr/include/sys/kiconv_hkscs_utf8.h
686 usr/include/sys/kiconv_ja_jis_to_unicode.h
687 usr/include/sys/kiconv_ja_unicode_to_jis.h
688 usr/include/sys/kiconv_ja.h
689 usr/include/sys/kiconv_ko.h
690 usr/include/sys/kiconv_latin1.h
691 usr/include/sys/kiconv_sc.h
692 usr/include/sys/kiconv_tc.h
693 usr/include/sys/kiconv_uhc_utf8.h
694 usr/include/sys/kiconv_utf8_big5.h
695 usr/include/sys/kiconv_utf8_cp950hkscs.h
696 usr/include/sys/kiconv_utf8_euckr.h
697 usr/include/sys/kiconv_utf8_euctw.h
698 usr/include/sys/kiconv_utf8_gb18030.h
699 usr/include/sys/kiconv_utf8_gb2312.h
700 usr/include/sys/kiconv_utf8_hkscs.h
701 usr/include/sys/kiconv_utf8_uhc.h
702 #
703 # At this time, the directory and its contents
704 # are only useful on sun4u systems
705 #
706 etc/flash/postdeployment          i386
707 #
708 # This header file is shared only between the power commands and
709 # ppm/srn modules # and should not be in any package
710 #
711 usr/include/sys/srn.h
712 #
713 # Private/Internal header files of smbserver. Do not ship.
714 #
715 usr/include/smb
716 usr/include/smbserver
717 #
718 # Private/Internal files for libfakekernel. Do not ship.
719 #
720 lib/amd64/libfakekernel.so          i386
721 lib/amd64/llib-lfakekernel.ln      i386

```

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```

722 lib/sparcv9/libfakekernel.so          sparcc
723 lib/sparcv9/llib-lfakekernel.ln      sparcc
724 lib/libfakekernel.so
725 lib/llib-lfakekernel
726 lib/llib-lfakekernel.ln
727 usr/include/libfakekernel
728 usr/lib/libfakekernel.so
729 usr/lib/amd64/libfakekernel.so        i386
730 usr/lib/sparcv9/libfakekernel.so     sparcc
731 #
732 # Private/Internal libraries of smbserver. Do not ship.
733 #
734 usr/lib/mdb/proc/libfksmbserver.so
735 usr/lib/mdb/proc/amd64/libfksmbserver.so i386
736 usr/lib/mdb/proc/sparcv9/libfksmbserver.so sparcc
737 usr/lib/reparse/llib-lreparse_smb
738 usr/lib/reparse/llib-lreparse_smb.ln
739 usr/lib/smbserver/bind-helper
740 usr/lib/smbserver/fksmbd
741 usr/lib/smbserver/libfksmbserver.so
742 usr/lib/smbserver/libfksmbserver.so.1
743 usr/lib/smbserver/libmlsvc.so
744 usr/lib/smbserver/libmsmb.so
745 usr/lib/smbserver/libmsmbns.so
746 usr/lib/smbserver/llib-lfksmbserver
747 usr/lib/smbserver/llib-lfksmbserver.ln
748 usr/lib/smbserver/llib-lmlrpc
749 usr/lib/smbserver/llib-lmlrpc.ln
750 usr/lib/smbserver/llib-lmlsvc
751 usr/lib/smbserver/llib-lmlsvc.ln
752 usr/lib/smbserver/llib-lsmb
753 usr/lib/smbserver/llib-lsmb.ln
754 usr/lib/smbserver/llib-lsmbns
755 usr/lib/smbserver/llib-lsmbns.ln
756 #
757 # Private/Internal 64-bit libraries of smbserver. Do not ship.
758 #
759 usr/lib/smbserver/amd64          i386
760 usr/lib/smbserver/sparcv9       sparcc
761 usr/lib/reparse/amd64/libreparse_smb.so i386
762 usr/lib/reparse/amd64/libreparse_smb.so.1 i386
763 usr/lib/reparse/amd64/llib-lreparse_smb.ln i386
764 usr/lib/reparse/sparcv9/libreparse_smb.so sparcc
765 usr/lib/reparse/sparcv9/libreparse_smb.so.1 sparcc
766 usr/lib/reparse/sparcv9/llib-lreparse_smb.ln sparcc
767 #
768 # Private dirent, extended to include flags, for use by SMB server
769 #
770 usr/include/sys/extdirent.h
771 #
772 # Private header files for vsca service
773 #
774 usr/include/libvsca.h
775 usr/include/sys/vsca.h
776 #
777 # libvsca is private
778 #
779 usr/lib/vsca/llib-lvsca
780 usr/lib/vsca/llib-lvsca.ln
781 #
782 # i86hvm is not a full platform. It is just a home for paravirtualized
783 # drivers. There is no usr/ component to this sub-platform, but the
784 # directory is created in the proto area to keep other tools happy.
785 #

```

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```

786 usr/platform/i86hvm                               i386
787 #
788 # Private sdcards framework headers
789 #
790 usr/include/sys/sdcards
791 #
792 # libmlrpc is private (SMB client and server)
793 # libsmf is private
794 #
795 usr/include/libmlrpc
796 usr/lib/libmlrpc.so                                i386
797 usr/lib/amd64/libmlrpc.so                          i386
798 usr/lib/sparcv9/libmlrpc.so                        sparc
799 usr/lib/sparcv9/libmlrpc.so.2                      sparc
800 usr/lib/llib-mlrpc
801 usr/lib/llib-mlrpc.ln
802 usr/lib/amd64/llib-mlrpc.ln                       i386
803 usr/lib/sparcv9/llib-mlrpc.ln                     sparc
804 #
805 # libsmf is private (SMB client and server)
806 #
807 usr/include/netmb
808 usr/lib/libsmf.so
809 usr/lib/amd64/libsmf.so                            i386
810 usr/lib/sparcv9/libsmf.so                          sparc
811 usr/lib/llib-lsmf
812 usr/lib/llib-lsmf.ln
813 usr/lib/amd64/llib-lsmf.ln                        i386
814 usr/lib/sparcv9/llib-lsmf.ln                     sparc
815 #
816 # demo & test program for smf (private) ACL support
817 #
818 usr/lib/fs/smf/chacl
819 usr/lib/fs/smf/lsacl
820 opt/smf-tests
821 #
822 # FC related files
823 kernel/kmdb/amd64/fcip                             i386
824 kernel/kmdb/sparcv9/fcip                           sparc
825 kernel/kmdb/amd64/fcp                              i386
826 kernel/kmdb/sparcv9/fcp                            sparc
827 kernel/kmdb/amd64/fctl                             i386
828 kernel/kmdb/sparcv9/fctl                           sparc
829 kernel/kmdb/amd64/qlc                              i386
830 kernel/kmdb/sparcv9/qlc                            sparc
831 lib/llib-la5k                                     sparc
832 lib/llib-la5k.ln                                  sparc
833 lib/sparcv9/llib-la5k.ln                           sparc
834 lib/llib-lg_fc                                    sparc
835 lib/llib-lg_fc.ln                                  sparc
836 lib/sparcv9/llib-lg_fc.ln                          sparc
837 usr/include/a_state.h                              sparc
838 usr/include/a5k.h                                  sparc
839 usr/include/exec.h                                  sparc
840 usr/include/g_scsi.h                                sparc
841 usr/include/g_state.h                              sparc
842 usr/include/gfc.h                                  sparc
843 usr/include/l_common.h                             sparc
844 usr/include/l_error.h                              sparc
845 usr/include/rom.h                                  sparc
846 usr/include/stgcom.h                               sparc
847 usr/include/sys/fibre-channel
848 usr/lib/llib-LHBAAPI
849 usr/lib/llib-LHBAAPI.ln
850 usr/lib/amd64/llib-LHBAAPI.ln                     i386

```

```

851 usr/lib/sparcv9/llib-LHBAAPI.ln sparc
852 #
853 usr/bin/dscfgcli
854 usr/bin/sd_diag
855 usr/bin/sd_stats
856 usr/include/nsctl.h
857 usr/include/sys/ncall
858 usr/include/sys/nsc_ddi.h
859 usr/include/sys/nsc_thread.h
860 usr/include/sys/nsctl
861 usr/include/sys/nskernd.h
862 usr/include/sys/unistat
863 usr/lib/libnsctl.so
864 usr/lib/librdc.so
865 usr/lib/libunistat.so
866 usr/lib/llib-lnsctl.ln
867 usr/lib/llib-lrdc.ln
868 usr/lib/llib-lunistat.ln
869 #
870 # These files are used by the iSCSI initiator only.
871 # No reason to ship them.
872 #
873 usr/include/sys/scsi/adapters/iscsi_door.h
874 usr/include/sys/scsi/adapters/iscsi_if.h
875 #
876 # sbd ioctl hdr
877 #
878 usr/include/sys/stmf_sbd_ioctl.h
879 #
880 # proxy port provider interface
881 #
882 usr/include/sys/pppt_ic_if.h
883 usr/include/sys/pppt_ioctl.h
884 #
885 # proxy daemon lint library
886 #
887 usr/lib/llib-lstmfproxy
888 usr/lib/llib-lstmfproxy.ln
889 usr/lib/amd64/llib-lstmfproxy.ln                   i386
890 usr/lib/sparcv9/llib-lstmfproxy.ln                 sparc
891 #
892 # portable object file and dictionary used by libfmd_msg test
893 #
894 usr/lib/fm/dict/TEST.dict
895 usr/lib/locale/C/LC_MESSAGES/TEST.mo
896 usr/lib/locale/C/LC_MESSAGES/TEST.po
897 #
898 # Private idmap RPC protocol
899 #
900 usr/include/rpcsvc/idmap_prot.h
901 usr/include/rpcsvc/idmap_prot.x
902 #
903 # Private idmap directory API
904 #
905 usr/include/directory.h
906 #
907 # librstp is private for bridging
908 #
909 usr/include/stp_bpdu.h
910 usr/include/stp_in.h
911 usr/include/stp_vectors.h
912 usr/lib/librstp.so
913 usr/lib/llib-lrstp
914 usr/lib/llib-lrstp.ln
915 #
916 # Private nvfru API

```

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```

917 #
918 usr/include/nvfru.h
919 #
920 # vrrp
921 #
922 usr/include/libvrrpadm.h
923 usr/lib/libvrrpadm.so
924 usr/lib/amd64/libvrrpadm.so          i386
925 usr/lib/sparcv9/libvrrpadm.so      sparc
926 usr/lib/llib-lvrrpadm
927 usr/lib/llib-llib-lvrrpadm.ln
928 usr/lib/amd64/llib-lvrrpadm.ln     i386
929 usr/lib/sparcv9/llib-lvrrpadm.ln   sparc
930 #
931 # This is only used during the -t tools build
932 #
933 opt/onbld/bin/i386/mandoc           i386
934 opt/onbld/bin/sparc/mandoc         sparc
935 opt/onbld/bin/i386/vtfontcvt      i386
936 opt/onbld/bin/sparc/vtfontcvt     sparc

938 #
939 # Private libdwarf
940 #
941 opt/onbld/lib/i386/libdwarf.so     i386
942 opt/onbld/lib/sparc/libdwarf.so    sparc

944 #
945 # Private socket filter API
946 #
947 usr/include/sys/sockfilter.h
948 #
949 # We don't actually validate license action payloads, and the license
950 # staging area is provided as a separate basedir for package
951 # publication. The net result is that everything therein should be
952 # ignored for packaging validation.
953 #
954 licenses
955 #
956 # Libbe is private
957 #
958 usr/include/libbe_priv.h
959 #
960 # ipmi is at present only useful on i386, but for historical reasons is
961 # delivered on SPARC and used by the build.
962 #
963 usr/include/sys/ipmi.h             sparc

965 #
966 # libsaveargs is private
967 #
968 usr/include/saveargs.h             i386
969 usr/lib/amd64/libsaveargs.so        i386
970 usr/lib/amd64/libstandsaveargs.so  i386
971 usr/lib/amd64/llib-lsaveargs.ln    i386

973 #
974 # libpcidb is private
975 #
976 usr/include/pcidb.h
977 usr/lib/amd64/libpcidb.so          i386
978 usr/lib/amd64/llib-lpcidb.ln     i386
979 usr/lib/sparcv9/libpcidb.so       sparc
980 usr/lib/sparcv9/llib-lpcidb.ln   sparc
981 usr/lib/libpcidb.so
982 usr/lib/llib-lpcidb

```

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```

983 usr/lib/llib-lpcidb.ln

985 #
986 # private nvme header file
987 #
988 usr/include/sys/nvme.h

990 #
991 # debugging program for libadutils
992 #
993 usr/bin/test-getdc
994 #
995 # libficl-sys is private
996 #
997 usr/include/ficllocal.h
998 usr/lib/amd64/llib-lficl-sys.ln    i386
999 usr/lib/amd64/libficl-sys.so       i386
1000 usr/lib/sparcv9/llib-lficl-sys.ln sparc
1001 usr/lib/sparcv9/libficl-sys.so     sparc
1002 usr/lib/llib-lficl-sys
1003 usr/lib/llib-llib-lficl-sys.ln
1004 usr/lib/libficl-sys.so

1006 #
1007 # libsff is private
1008 #
1009 usr/include/libsff.h
1010 usr/lib/amd64/libsff.so             i386
1011 usr/lib/amd64/llib-lsff.ln        i386
1012 usr/lib/sparcv9/libsff.so         sparc
1013 usr/lib/sparcv9/llib-lsff.ln     sparc
1014 usr/lib/libsff.so
1015 usr/lib/llib-lsff
1016 usr/lib/llib-lsff.ln

```



```

*****
36052 Sun Mar 18 01:13:14 2018
new/usr/src/Makefile.master
1575 untangle libmlrpc ... (libmlrpc)
*****
1 #
2 # CDDL HEADER START
3 #
4 # The contents of this file are subject to the terms of the
5 # Common Development and Distribution License (the "License").
6 # You may not use this file except in compliance with the License.
7 #
8 # You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9 # or http://www.opensolaris.org/os/licensing.
10 # See the License for the specific language governing permissions
11 # and limitations under the License.
12 #
13 # When distributing Covered Code, include this CDDL HEADER in each
14 # file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 # If applicable, add the following below this CDDL HEADER, with the
16 # fields enclosed by brackets "[]" replaced with your own identifying
17 # information: Portions Copyright [yyyy] [name of copyright owner]
18 #
19 # CDDL HEADER END
20 #
21 #
22 #
23 # Copyright (c) 1989, 2010, Oracle and/or its affiliates. All rights reserved.
24 # Copyright (c) 2012 by Delphix. All rights reserved.
25 # Copyright 2014 Garrett D'Amore <garrett@damore.org>
26 # Copyright 2015, OmniTI Computer Consulting, Inc. All rights reserved.
27 # Copyright 2015 Gary Mills
28 # Copyright 2015 Igor Kozhukhov <ikozhukhov@gmail.com>
29 # Copyright 2016 Toomas Soome <tsoome@me.com>
30 #
31 #
32 #
33 # Makefile.master, global definitions for system source
34 #
35 ROOT=          /proto
36 #
37 #
38 # Adjunct root, containing an additional proto area to be used for headers
39 # and libraries.
40 #
41 ADJUNCT_PROTO=
42 #
43 #
44 # Adjunct for building things that run on the build machine.
45 #
46 NATIVE_ADJUNCT= /usr
47 #
48 #
49 # RELEASE_BUILD should be cleared for final release builds.
50 # NOT_RELEASE_BUILD is exactly what the name implies.
51 #
52 # __GNUC toggles the building of ON components using gcc and related tools.
53 # Normally set to '#', set it to '' to do gcc build.
54 #
55 # The declaration POUND_SIGN is always '#'. This is needed to get around the
56 # make feature that '#' is always a comment delimiter, even when escaped or
57 # quoted. We use this macro expansion method to get POUND_SIGN rather than
58 # always breaking out a shell because the general case can cause a noticable
59 # slowdown in build times when so many Makefiles include Makefile.master.
60 #
61 # While the majority of users are expected to override the setting below

```

```

62 # with an env file (via nightly or bldenv), if you aren't building that way
63 # (ie, you're using "ws" or some other bootstrapping method) then you need
64 # this definition in order to avoid the subshell invocation mentioned above.
65 #
66 #
67 PRE_POUND=          pre\#
68 POUND_SIGN=         $(PRE_POUND:pre\#=%%)
69 #
70 NOT_RELEASE_BUILD=
71 RELEASE_BUILD=      $(POUND_SIGN)
72 $(RELEASE_BUILD)NOT_RELEASE_BUILD= $(POUND_SIGN)
73 PATCH_BUILD=       $(POUND_SIGN)
74 #
75 # SPARC_BLD is '#' for an Intel build.
76 # INTEL_BLD is '#' for a Sparc build.
77 SPARC_BLD_1=        $(MACH:i386=$(POUND_SIGN))
78 SPARC_BLD=          $(SPARC_BLD_1:sparc=)
79 INTEL_BLD_1=        $(MACH:sparc=$(POUND_SIGN))
80 INTEL_BLD=          $(INTEL_BLD_1:i386=)
81 #
82 # The variables below control the compilers used during the build.
83 # There are a number of permutations.
84 #
85 # __GNUC and __SUNC control (and indicate) the primary compiler. Whichever
86 # one is not POUND_SIGN is the primary, with the other as the shadow. They
87 # may also be used to control entirely compiler-specific Makefile assignments.
88 # __GNUC and GCC are the default.
89 #
90 # __GNUC64 indicates that the 64bit build should use the GNU C compiler.
91 # There is no Sun C analogue.
92 #
93 # The following version-specific options are operative regardless of which
94 # compiler is primary, and control the versions of the given compilers to be
95 # used. They also allow compiler-version specific Makefile fragments.
96 #
97 #
98 __SUNC=              $(POUND_SIGN)
99 $(__SUNC)__GNUC=    $(POUND_SIGN)
100 __GNUC64=           $(__GNUC)
101 #
102 # Allow build-time "configuration" to enable or disable some things.
103 # The default is POUND_SIGN, meaning "not enabled". If the environment
104 # passes in an override like ENABLE_SMB_PRINTING= (empty) that will
105 # uncomment things in the lower Makefiles to enable the feature.
106 ENABLE_SMB_PRINTING= $(POUND_SIGN)
107 #
108 # CLOSED is the root of the tree that contains source which isn't released
109 # as open source
110 CLOSED=             $(SRC)/../closed
111 #
112 # BUILD_TOOLS is the root of all tools including compilers.
113 # ONBLD_TOOLS is the root of all the tools that are part of SUNWonbld.
114 #
115 BUILD_TOOLS=        /ws/onnv-tools
116 ONBLD_TOOLS=        $(BUILD_TOOLS)/onbld
117 #
118 # define runtime JAVA_HOME, primarily for cmd/pools/poold
119 JAVA_HOME=          /usr/java
120 # define buildtime JAVA_ROOT
121 JAVA_ROOT=          /usr/java
122 # define to build with JAVA 8
123 BLD_JAVA_8=         $(POUND_SIGN)
124 #
125 GCC_ROOT=           /opt/gcc/4.4.4
126 GCCLIBDIR=          $(GCC_ROOT)/lib
127 GCCLIBDIR64=        $(GCC_ROOT)/lib/$(MACH64)

```

```

129 DOCBOOK_XSL_ROOT=      /usr/share/sgml/docbook/xsl-stylesheets

131 RPCGEN=                  /usr/bin/rpcgen
132 STABS=                   $(ONBLD_TOOLS)/bin/$(MACH)/stabs
133 ELFEXTRACT=              $(ONBLD_TOOLS)/bin/$(MACH)/elfextract
134 MBH_PATCH=               $(ONBLD_TOOLS)/bin/$(MACH)/mbh_patch
135 BTXLD=                   $(ONBLD_TOOLS)/bin/$(MACH)/btxld
136 VTFONTCVT=              $(ONBLD_TOOLS)/bin/$(MACH)/vtfontcvt
137 # echo(1) and true(1) are specified without absolute paths, so that the shell
138 # spawned by make(1) may use the built-in versions. This is minimally
139 # problematic, as the shell spawned by make(1) is known and under control, the
140 # only risk being if the shell falls back to $PATH.
141 #
142 # We specifically want an echo(1) that does interpolation of escape sequences,
143 # which ksh93, /bin/sh, and bash will all provide.
144 ECHO=                      echo
145 TRUE=                     true
146 INS=                      $(ONBLD_TOOLS)/bin/$(MACH)/install
147 SYMLINK=                  /usr/bin/ln -s
148 LN=                       /usr/bin/ln
149 MKDIR=                    /usr/bin/mkdir
150 CHMOD=                    /usr/bin/chmod
151 MV=                       /usr/bin/mv -f
152 RM=                       /usr/bin/rm -f
153 CUT=                      /usr/bin/cut
154 NM=                       /usr/ccs/bin/nm
155 DIFF=                    /usr/bin/diff
156 GREP=                    /usr/bin/grep
157 EGREP=                   /usr/bin/egrep
158 ELFWRAP=                 /usr/bin/elfwrap
159 KSH93=                   /usr/bin/ksh93
160 SED=                     /usr/bin/sed
161 AWK=                     /usr/bin/nawk
162 CP=                      /usr/bin/cp -f
163 MCS=                     /usr/ccs/bin/mcs
164 CAT=                     /usr/bin/cat
165 ELFDUMP=                 /usr/ccs/bin/elfdump
166 M4=                      /usr/bin/m4
167 STRIP=                   /usr/ccs/bin/strip
168 LEX=                     /usr/ccs/bin/lex
169 FLEX=                    /usr/bin/flex
170 YACC=                    /usr/ccs/bin/yacc
171 CPP=                     /usr/lib/cpp
172 ANSI_CPP=                $(GCC_ROOT)/bin/cpp
173 JAVAC=                   $(JAVA_ROOT)/bin/javac
174 JAVAH=                   $(JAVA_ROOT)/bin/javah
175 JAVADOC=                 $(JAVA_ROOT)/bin/javadoc
176 RMIC=                    $(JAVA_ROOT)/bin/rmic
177 JAR=                     $(JAVA_ROOT)/bin/jar
178 CTFCONVERT=              $(ONBLD_TOOLS)/bin/$(MACH)/ctfconvert
179 CTFMERGE=                $(ONBLD_TOOLS)/bin/$(MACH)/ctfmerge
180 CTFSTABS=                $(ONBLD_TOOLS)/bin/$(MACH)/ctfstabs
181 CTFSTRIP=                $(ONBLD_TOOLS)/bin/$(MACH)/ctfstrip
182 NDRGEN=                  $(ONBLD_TOOLS)/bin/$(MACH)/ndrgen
183 GENOFFSETS=             $(ONBLD_TOOLS)/bin/genoffsets
184 XREF=                    $(ONBLD_TOOLS)/bin/xref
185 FIND=                    /usr/bin/find
186 PERL=                    /usr/bin/perl
187 PERL_VERSION=            5.10.0
188 PERL_PKGVERS=           -510
189 PERL_ARCH =              i86pc-solaris-64int
190 $(SPARC_BLD)PERL_ARCH = sun4-solaris-64int
191 PYTHON_VERSION=         2.7
192 PYTHON_PKGVERS=         -27
193 PYTHON=                  /usr/bin/python$(PYTHON_VERSION)

```

```

194 SORT=                    /usr/bin/sort
195 TOUCH=                  /usr/bin/touch
196 WC=                     /usr/bin/wc
197 XARGS=                  /usr/bin/xargs
198 ELFDIT=                 /usr/bin/elfedit
199 DTRACE=                 /usr/sbin/dtrace -xnolib
200 UNIQ=                   /usr/bin/uniq
201 TAR=                    /usr/bin/tar
202 ASTBINDIR=              /usr/ast/bin
203 MSGCC=                  $(ASTBINDIR)/msgcc
204 MSGFMT=                 /usr/bin/msgfmt -s
205 LCDEF=                  $(ONBLD_TOOLS)/bin/$(MACH)/localedef
206 TIC=                    $(ONBLD_TOOLS)/bin/$(MACH)/tic
207 ZIC=                    $(ONBLD_TOOLS)/bin/$(MACH)/zic

209 FILEMODE=               644
210 DIRMODE=                755

212 # Declare that nothing should be built in parallel.
213 # Individual Makefiles can use the .PARALLEL target to declare otherwise.
214 .NO_PARALLEL:

216 # For stylistic checks
217 #
218 # Note that the X and C checks are not used at this time and may need
219 # modification when they are actually used.
220 #
221 CSTYLE=                  $(ONBLD_TOOLS)/bin/cstyle
222 CSTYLE_TAIL=             $(ONBLD_TOOLS)/bin/hdrchk
223 HDRCHK=                  $(ONBLD_TOOLS)/bin/hdrchk
224 HDRCHK_TAIL=             $(ONBLD_TOOLS)/bin/jstyle
225 JSTYLE=                  $(ONBLD_TOOLS)/bin/jstyle

227 DOT_H_CHECK=            \
228     @$ (ECHO) "checking $<"; $(CSTYLE) $< $(CSTYLE_TAIL); \
229     $(HDRCHK) $< $(HDRCHK_TAIL)

231 DOT_X_CHECK=            \
232     @$ (ECHO) "checking $<"; $(RPCGEN) -C -h $< | $(CSTYLE) $(CSTYLE_TAIL); \
233     $(RPCGEN) -C -h $< | $(HDRCHK) $< $(HDRCHK_TAIL)

235 DOT_C_CHECK=            \
236     @$ (ECHO) "checking $<"; $(CSTYLE) $< $(CSTYLE_TAIL)

238 MANIFEST_CHECK=         \
239     @$ (ECHO) "checking $<"; \
240     SVCCFG_DTD=$(SRC)/cmd/svc/dtd/service_bundle.dtd.1 \
241     SVCCFG_REPOSITORY=$(SRC)/cmd/svc/seed/global.db \
242     SVCCFG_CONFIGD_PATH=$(SRC)/cmd/svc/configd/svc.configd-native \
243     $(SRC)/cmd/svc/svccfg/svccfg-native validate $<

245 INS.file=                $(RM) $@; $(INS) -s -m $(FILEMODE) -f $(@D) $<
246 INS.dir=                 $(INS) -s -d -m $(DIRMODE) $@
247 # installs and renames at once
248 #
249 INS.rename=              $(INS.file); $(MV) $(@D)/$(<F) $@

251 # install a link
252 INSLINKTARGET=          $<
253 INS.link=                $(RM) $@; $(LN) $(INSLINKTARGET) $@
254 INS.symlink=             $(RM) $@; $(SYMLINK) $(INSLINKTARGET) $@

256 #
257 # Python bakes the mtime of the .py file into the compiled .pyc and
258 # rebuilds if the baked-in mtime != the mtime of the source file
259 # (rather than only if it's less than), thus when installing python

```

```

260 # files we must make certain to not adjust the mtime of the source
261 # (.py) file.
262 #
263 INS.pyfile=      $(RM) $@; $(SED) -e "ls:^\#@PYTHON@:\#@!$(PYTHON):" < $< > $@; $
264 #
265 # MACH must be set in the shell environment per uname -p on the build host
266 # More specific architecture variables should be set in lower makefiles.
267 #
268 # MACH64 is derived from MACH, and BUILD64 is set to '#' for
269 # architectures on which we do not build 64-bit versions.
270 # (There are no such architectures at the moment.)
271 #
272 # Set BUILD64=# in the environment to disable 64-bit amd64
273 # builds on i386 machines.
274 #
275 MACH64_1=        $(MACH:sparc=sparcv9)
276 MACH64=          $(MACH64_1:i386=amd64)
277 #
278 MACH32_1=        $(MACH:sparc=sparcv7)
279 MACH32=          $(MACH32_1:i386=i86)
280 #
281 sparc_BUILD64=
282 i386_BUILD64=
283 BUILD64=        $($(_MACH)_BUILD64)
284 #
285 #
286 # C compiler mode. Future compilers may change the default on us,
287 # so force extended ANSI mode globally. Lower level makefiles can
288 # override this by setting CCMODE.
289 #
290 CCMODE=          -Xa
291 CCMODE64=        -Xa
292 #
293 #
294 # C compiler verbose mode. This is so we can enable it globally,
295 # but turn it off in the lower level makefiles of things we cannot
296 # (or aren't going to) fix.
297 #
298 CCVERBOSE=      -v
299 #
300 # set this to the secret flag "-Wc,-Qiselect-v9abiwarn=1" to get warnings
301 # from the compiler about places the -xarch=v9 may differ from -xarch=v9c.
302 V9ABIWARN=
303 #
304 # set this to the secret flag "-Wc,-Qiselect-regsym=0" to disable register
305 # symbols (used to detect conflicts between objects that use global registers)
306 # we disable this now for safety, and because genunix doesn't link with
307 # this feature (the v9 default) enabled.
308 #
309 # REGSYM is separate since the C++ driver syntax is different.
310 CCREGSYM=        -Wc,-Qiselect-regsym=0
311 CCCREGSYM=       -Ooption cg -Qiselect-regsym=0
312 #
313 # Prevent the removal of static symbols by the SPARC code generator (cg).
314 # The x86 code generator (ube) does not remove such symbols and as such
315 # using this workaround is not applicable for x86.
316 #
317 CCSTATICSYM=     -Wc,-Qassembler-ounrefsym=0
318 #
319 # generate 32-bit addresses in the v9 kernel. Saves memory.
320 CCABS32=         -Wc,-xcode=abs32
321 #
322 # generate v9 code which tolerates callers using the v7 ABI, for the sake of
323 # system calls.
324 CC32BITCALLERS=  _gcc=-massume-32bit-callers

```

```

326 # GCC, especially, is increasingly beginning to auto-inline functions and
327 # sadly does so separately not under the general -fno-inline-functions
328 # Additionally, we wish to prevent optimisations which cause GCC to clone
329 # functions -- in particular, these may cause unhelpful symbols to be
330 # emitted instead of function names
331 CCNOAUTOINLINE= _gcc=-fno-inline-small-functions \
332                _gcc=-fno-inline-functions-called-once \
333                _gcc=-fno-ipa-cp
334 #
335 # One optimization the compiler might perform is to turn this:
336 #   #pragma weak foo
337 #   extern int foo;
338 #   if (&foo)
339 #       foo = 5;
340 # into
341 #   foo = 5;
342 # Since we do some of this (foo might be referenced in common kernel code
343 # but provided only for some cpu modules or platforms), we disable this
344 # optimization.
345 #
346 sparc_CCUNBOUND = -Wd,-xsafe=unboundsym
347 i386_CCUNBOUND =
348 CCUNBOUND =      $($(_MACH)_CCUNBOUND)
349 #
350 #
351 # compiler '-xarch' flag. This is here to centralize it and make it
352 # overridable for testing.
353 sparc_XARCH=     -m32
354 sparcv9_XARCH=  -m64
355 i386_XARCH=     -m32
356 amd64_XARCH=    -m64 -Ui386 -U_i386
357 #
358 # assembler '-xarch' flag. Different from compiler '-xarch' flag.
359 sparc_AS_XARCH=  -xarch=v8plus
360 sparcv9_AS_XARCH= -xarch=v9
361 i386_AS_XARCH=
362 amd64_AS_XARCH=  -xarch=amd64 -P -Ui386 -U_i386
363 #
364 #
365 # These flags define what we need to be 'standalone' i.e. -not- part
366 # of the rather more cosy userland environment. This basically means
367 # the kernel.
368 #
369 # XX64 future versions of gcc will make -mmodel=kernel imply -mno-red-zone
370 #
371 sparc_STAND_FLAGS=  _gcc=-ffreestanding
372 sparcv9_STAND_FLAGS= _gcc=-ffreestanding
373 # Disabling MMX also disables 3DNow, disabling SSE also disables all later
374 # additions to SSE (SSE2, AVX ,etc.)
375 NO_SIMD=           _gcc=-mno-mmx _gcc=-mno-sse
376 i386_STAND_FLAGS=  _gcc=-ffreestanding $(NO_SIMD)
377 amd64_STAND_FLAGS= -xmodel=kernel $(NO_SIMD)
378 #
379 SAVEARGS=         -Wu,-save_args
380 amd64_STAND_FLAGS += $(SAVEARGS)
381 #
382 STAND_FLAGS_32 =  $($(_MACH)_STAND_FLAGS)
383 STAND_FLAGS_64 =  $($(_MACH64)_STAND_FLAGS)
384 #
385 #
386 # disable the incremental linker
387 ILDOFF=           -xildoff
388 #
389 XDEPEND=          -xdepend
390 XFFLAG=           -xF=%all
391 XESS=             -xs

```

```

392 XSTRCONST=          -xstrconst

394 #
395 # turn warnings into errors (C)
396 CERRWARN = -errtags=yes -errwarn=all
397 CERRWARN += -erroff=E_EMPTY_TRANSLATION_UNIT
398 CERRWARN += -erroff=E_STATEMENT_NOT_REACHED

400 CERRWARN += -_gcc=-Wno-missing-braces
401 CERRWARN += -_gcc=-Wno-sign-compare
402 CERRWARN += -_gcc=-Wno-unknown-pragmas
403 CERRWARN += -_gcc=-Wno-unused-parameter
404 CERRWARN += -_gcc=-Wno-missing-field-initializers

406 # Unfortunately, this option can misfire very easily and unfixably.
407 CERRWARN += -_gcc=-Wno-array-bounds

409 # DEBUG v. -nd make for frequent unused variables, empty conditions, etc. in
410 # -nd builds
411 $(RELEASE_BUILD)CERRWARN += -_gcc=-Wno-unused
412 $(RELEASE_BUILD)CERRWARN += -_gcc=-Wno-empty-body

414 #
415 # turn warnings into errors (C++)
416 CCERRWARN=          -xwe

418 # C standard. Keep Studio flags until we get rid of lint.
419 CSTD_GNU89=         -xc99=%none
420 CSTD_GNU99=         -xc99=%all
421 CSTD=               $(CSTD_GNU89)
422 C99LMODE=          $(CSTD:-xc99%=-Xc99%)

424 # In most places, assignments to these macros should be appended with +=
425 # (CPPFLAGS.first allows values to be prepended to CPPFLAGS).
426 sparc_CFLAGS=      $(sparc_XARCH) $(CCSTATICSYM)
427 sparcv9_CFLAGS=    $(sparcv9_XARCH) -dalign $(CCVERBOSE) $(V9ABIWARN) $(CCREGSYM) \
428                   $(CCSTATICSYM)
429 i386_CFLAGS=       $(i386_XARCH)
430 amd64_CFLAGS=      $(amd64_XARCH)

432 sparc_ASFLAGS=     $(sparc_AS_XARCH)
433 sparcv9_ASFLAGS=   $(sparcv9_AS_XARCH)
434 i386_ASFLAGS=      $(i386_AS_XARCH)
435 amd64_ASFLAGS=     $(amd64_AS_XARCH)

437 #
438 sparc_COPTFLAG=     -xO3
439 sparcv9_COPTFLAG=  -xO3
440 i386_COPTFLAG=     -O
441 amd64_COPTFLAG=    -xO3

443 COPTFLAG=          $(MACH)_COPTFLAG
444 COPTFLAG64=        $(MACH64)_COPTFLAG

446 # When -g is used, the compiler globalizes static objects
447 # (gives them a unique prefix). Disable that.
448 CNOGLOBAL= -W0,-noglobal

450 # Direct the Sun Studio compiler to use a static globalization prefix based on t
451 # name of the module rather than something unique. Otherwise, objects
452 # will not build deterministically, as subsequent compilations of identical
453 # source will yield objects that always look different.
454 #
455 # In the same spirit, this will also remove the date from the N_OPT stab.
456 CGLOBALSTATIC= -W0,-xglobalstatic

```

```

458 # Sometimes we want all symbols and types in debugging information even
459 # if they aren't used.
460 CALLSYMS=          -W0,-xdbggen=no%usedonly

462 #
463 # Default debug format for Sun Studio 11 is dwarf, so force it to
464 # generate stabs.
465 #
466 DEBUGFORMAT=       -xdebugformat=stabs

468 #
469 # Flags used to build in debug mode for ctf generation. Bugs in the Devpro
470 # compilers currently prevent us from building with cc-emitted DWARF.
471 #
472 CTF_FLAGS_sparc = -g -Wc,-Qiselect-T1 $(CSTD) $(CNOGLOBAL) $(CDWARFSTR)
473 CTF_FLAGS_i386 = -g $(CSTD) $(CNOGLOBAL) $(CDWARFSTR)

475 CTF_FLAGS_sparcv9 = $(CTF_FLAGS_sparc)
476 CTF_FLAGS_amd64 = $(CTF_FLAGS_i386)

478 # Sun Studio produces broken userland code when saving arguments.
479 $(__GNUCC)CTF_FLAGS_amd64 += $(SAVEARGS)

481 CTF_FLAGS_32 = $(CTF_FLAGS_$(MACH)) $(DEBUGFORMAT)
482 CTF_FLAGS_64 = $(CTF_FLAGS_$(MACH64)) $(DEBUGFORMAT)
483 CTF_FLAGS = $(CTF_FLAGS_32)

485 #
486 # Flags used with genoffsets
487 #
488 GOFLAGS = -_noecho \
489           $(CALLSYMS) \
490           $(CDWARFSTR)

492 OFFSETS_CREATE = $(GENOFFSETS) -s $(CTFSTABS) -r $(CTFCONVERT) \
493                 $(CC) $(GOFLAGS) $(CFLAGS) $(CPPFLAGS)

495 OFFSETS_CREATE64 = $(GENOFFSETS) -s $(CTFSTABS) -r $(CTFCONVERT) \
496                    $(CC) $(GOFLAGS) $(CFLAGS64) $(CPPFLAGS)

498 #
499 # tradeoff time for space (smaller is better)
500 #
501 sparc_SPACEFLAG = -xspace -W0,-Lt
502 sparcv9_SPACEFLAG = -xspace -W0,-Lt
503 i386_SPACEFLAG = -xspace
504 amd64_SPACEFLAG =

506 SPACEFLAG = $(MACH)_SPACEFLAG
507 SPACEFLAG64 = $(MACH64)_SPACEFLAG

509 #
510 # The Sun Studio 11 compiler has changed the behaviour of integer
511 # wrap arounds and so a flag is needed to use the legacy behaviour
512 # (without this flag panics/hangs could be exposed within the source).
513 #
514 sparc_IROPTFLAG = -W2,-xwrap_int
515 sparcv9_IROPTFLAG = -W2,-xwrap_int
516 i386_IROPTFLAG =
517 amd64_IROPTFLAG =

519 IROPTFLAG = $(MACH)_IROPTFLAG
520 IROPTFLAG64 = $(MACH64)_IROPTFLAG

522 sparc_XREGSFLAG = -xregs=no%appl
523 sparcv9_XREGSFLAG = -xregs=no%appl

```

```

524 i386_XREGSFLAG      =
525 amd64_XREGSFLAG     =

527 XREGSFLAG           = $($MACH)_XREGSFLAG
528 XREGSFLAG64         = $($MACH64)_XREGSFLAG

530 # dmake SOURCEDEBUG=yes ... enables source-level debugging information, and
531 # avoids stripping it.
532 SOURCEDEBUG         = $(POUND_SIGN)
533 SRCDBGBLD           = $(SOURCEDEBUG:yes=)

535 #
536 # These variables are intended ONLY for use by developers to safely pass extra
537 # flags to the compilers without unintentionally overriding Makefile-set
538 # flags. They should NEVER be set to any value in a Makefile.
539 #
540 # They come last in the associated FLAGS variable such that they can
541 # explicitly override things if necessary, there are gaps in this, but it's
542 # the best we can manage.
543 #
544 CUSERFLAGS           =
545 CUSERFLAGS64         = $(CUSERFLAGS)
546 CCUSERFLAGS          =
547 CCUSERFLAGS64        = $(CCUSERFLAGS)

549 CSOURCEDEBUGFLAGS   =
550 CCSOURCEDEBUGFLAGS   =
551 $(SRDBGBLD)CSOURCEDEBUGFLAGS = -g -xs
552 $(SRDBGBLD)CCSOURCEDEBUGFLAGS = -g -xs

554 CFLAGS=              $(COPTFLAG) $($MACH)_CFLAGS $(SPACEFLAG) $(CCMODE) \
555                       $(ILDOFF) $(CERRWARN) $(CSTD) $(CCUNBOUND) $(IROPTFLAG) \
556                       $(CGLOBALSTATIC) $(CCNOAUTOINLINE) $(CSOURCEDEBUGFLAGS) \
557                       $(CUSERFLAGS)
558 CFLAGS64=            $(COPTFLAG64) $($MACH64)_CFLAGS $(SPACEFLAG64) $(CCMODE64) \
559                       $(ILDOFF) $(CERRWARN) $(CSTD) $(CCUNBOUND) $(IROPTFLAG64) \
560                       $(CGLOBALSTATIC) $(CCNOAUTOINLINE) $(CSOURCEDEBUGFLAGS) \
561                       $(CUSERFLAGS64)
562 #
563 # Flags that are used to build parts of the code that are subsequently
564 # run on the build machine (also known as the NATIVE_BUILD).
565 #
566 NATIVE_CFLAGS=       $(COPTFLAG) $($NATIVE_MACH)_CFLAGS $(CCMODE) \
567                       $(ILDOFF) $(CERRWARN) $(CSTD) $($NATIVE_MACH)_CCUNBOUND) \
568                       $(IROPTFLAG) $(CGLOBALSTATIC) $(CCNOAUTOINLINE) \
569                       $(CSOURCEDEBUGFLAGS) $(CUSERFLAGS)

571 DTEXTDOM=-DTEXT_DOMAIN="\$(TEXT_DOMAIN)" # For messaging.
572 DTS_ERRNO=-D_TS_ERRNO
573 CPPFLAGS.first= # Please keep empty. Only lower makefiles should set this.
574 CPPFLAGS.master=$(DTEXTDOM) $(DTS_ERRNO) \
575                 $(ENVCPPFLAGS1) $(ENVCPPFLAGS2) $(ENVCPPFLAGS3) $(ENVCPPFLAGS4) \
576                 $(ADJUNCT_PROTO:%=-I%/usr/include)
577 CPPFLAGS.native=$(ENVCPPFLAGS1) $(ENVCPPFLAGS2) $(ENVCPPFLAGS3) \
578                 $(ENVCPPFLAGS4) -I$(NATIVE_ADJUNCT)/include
579 CPPFLAGS=           $(CPPFLAGS.first) $(CPPFLAGS.master)
580 AS_CPPFLAGS=        $(CPPFLAGS.first) $(CPPFLAGS.master)
581 JAVAFLAGS=          -source 1.6 -target 1.6 -Xlint:deprecation,-options

583 #
584 # For source message catalogue
585 #
586 .SUFFIXES: $(SUFFIXES) .i .po
587 MSGROOT= $(ROOT)/catalog
588 MSGDOMAIN= $(MSGROOT)/$(TEXT_DOMAIN)
589 MSGDOMAINPOFILE = $(MSGDOMAIN)/$(POFILE)

```

```

590 DMSGDOMAIN= $(MSGROOT)/LC_TIME/$(TEXT_DOMAIN)
591 DMSGDOMAINPOFILE = $(DMSGDOMAIN)/$(DCFILE:.dc=.po)

593 CLOBBERFILES += $(POFILE) $(POFILES)
594 COMPILE.cpp= $(CC) -E -C $(CFLAGS) $(CPPFLAGS)
595 XGETTEXT= /usr/bin/xgettext
596 XGETTEXTFLAGS= -c TRANSLATION_NOTE
597 GNUXGETTEXT= /usr/gnu/bin/xgettext
598 GNUXGETTEXTFLAGS= --add-comments=TRANSLATION_NOTE --keyword=_ \
599                  --strict --no-location --omit-header
600 BUILD.po= $(XGETTEXT) $(XGETTEXTFLAGS) -d $(<F) $<.i ;\
601           $(RM) $@ ;\
602           $(SED) "/^domain/d" < $(<F).po > $@ ;\
603           $(RM) $(<F).po $<.i

605 #
606 # This is overwritten by local Makefile when PROG is a list.
607 #
608 POFILE= $(PROG).po

610 sparc_CCFLAGS=       -cg92 -compat=4 \
611                       -Option ccfe -messages=no%anachronism \
612                       $(CCERRWARN)
613 sparcv9_CCFLAGS=     $(sparcv9_XARCH) -dalign -compat=5 \
614                       -Option ccfe -messages=no%anachronism \
615                       -Option ccfe -features=no%conststrings \
616                       $(CCREGSYM) \
617                       $(CCERRWARN)
618 i386_CCFLAGS=        -compat=4 \
619                       -Option ccfe -messages=no%anachronism \
620                       -Option ccfe -features=no%conststrings \
621                       $(CCERRWARN)
622 amd64_CCFLAGS=       $(amd64_XARCH) -compat=5 \
623                       -Option ccfe -messages=no%anachronism \
624                       -Option ccfe -features=no%conststrings \
625                       $(CCERRWARN)

627 sparc_CCOPTFLAG=    -O
628 sparcv9_CCOPTFLAG=  -O
629 i386_CCOPTFLAG=     -O
630 amd64_CCOPTFLAG=    -O

632 CCOPTFLAG=           $($MACH)_CCOPTFLAG
633 CCOPTFLAG64=         $($MACH64)_CCOPTFLAG
634 CCFLAGS=             $(CCOPTFLAG) $($MACH)_CCFLAGS $(CCSOURCEDEBUGFLAGS) \
635                       $(CUSERFLAGS)
636 CCFLAGS64=           $(CCOPTFLAG64) $($MACH64)_CCFLAGS $(CCSOURCEDEBUGFLAGS) \
637                       $(CCUSERFLAGS64)

639 #
640 #
641 #
642 ELFWRAP_FLAGS =
643 ELFWRAP_FLAGS64 = -64

645 #
646 # Various mapfiles that are used throughout the build, and delivered to
647 # /usr/lib/ld.
648 #
649 MAPFILE.NED_i386 = $(SRC)/common/mapfiles/common/map.noexdata
650 MAPFILE.NED_sparc =
651 MAPFILE.NED = $(MAPFILE.NED_$(MACH))
652 MAPFILE.PGA = $(SRC)/common/mapfiles/common/map.pagealign
653 MAPFILE.NES = $(SRC)/common/mapfiles/common/map.noexstk
654 MAPFILE.FLT = $(SRC)/common/mapfiles/common/map.filter
655 MAPFILE.LEX = $(SRC)/common/mapfiles/common/map.lex.yy

```

```

657 #
658 # Generated mapfiles that are compiler specific, and used throughout the
659 # build. These mapfiles are not delivered in /usr/lib/ld.
660 #
661 MAPFILE.NGB_sparc= $(SRC)/common/mapfiles/gen/sparc_cc_map.noexeglobs
662 $(__GNUC64)MAPFILE.NGB_sparc= \
663 $(SRC)/common/mapfiles/gen/sparc_gcc_map.noexeglobs
664 MAPFILE.NGB_sparcv9= $(SRC)/common/mapfiles/gen/sparcv9_cc_map.noexeglobs
665 $(__GNUC64)MAPFILE.NGB_sparcv9= \
666 $(SRC)/common/mapfiles/gen/sparcv9_gcc_map.noexeglobs
667 MAPFILE.NGB_i386= $(SRC)/common/mapfiles/gen/i386_cc_map.noexeglobs
668 $(__GNUC64)MAPFILE.NGB_i386= \
669 $(SRC)/common/mapfiles/gen/i386_gcc_map.noexeglobs
670 MAPFILE.NGB_amd64= $(SRC)/common/mapfiles/gen/amd64_cc_map.noexeglobs
671 $(__GNUC64)MAPFILE.NGB_amd64= \
672 $(SRC)/common/mapfiles/gen/amd64_gcc_map.noexeglobs
673 MAPFILE.NGB = $(MAPFILE.NGB_$(MACH))

675 #
676 # A generic interface mapfile name, used by various dynamic objects to define
677 # the interfaces and interposers the object must export.
678 #
679 MAPFILE.INT = mapfile-intf

681 #
682 # LDLIBS32 and LDLIBS64 can be set in the environment to override the following
683 # assignments.
684 #
685 # These environment settings make sure that no libraries are searched outside
686 # of the local workspace proto area:
687 # LDLIBS32=-YP,$ROOT/lib:$ROOT/usr/lib
688 # LDLIBS64=-YP,$ROOT/lib/$MACH64:$ROOT/usr/lib/$MACH64
689 #
690 LDLIBS32 = $(ENVLDLIBS1) $(ENVLDLIBS2) $(ENVLDLIBS3)
691 LDLIBS32 += $(ADJUNCT_PROTO:%=-L%/usr/lib -L%/lib)
692 LDLIBS.cmd = $(LDLIBS32)
693 LDLIBS.lib = $(LDLIBS32)

695 LDLIBS64 = $(ENVLDLIBS1:%=%/$(MACH64)) \
696 $(ENVLDLIBS2:%=%/$(MACH64)) \
697 $(ENVLDLIBS3:%=%/$(MACH64))
698 LDLIBS64 += $(ADJUNCT_PROTO:%=-L%/usr/lib/$(MACH64) -L%/lib/$(MACH64))

700 #
701 # Define compilation macros.
702 #
703 COMPILE.c= $(CC) $(CFLAGS) $(CPPFLAGS) -c
704 COMPILE64.c= $(CC) $(CFLAGS64) $(CPPFLAGS) -c
705 COMPILE.cc= $(CCC) $(CCFLAGS) $(CPPFLAGS) -c
706 COMPILE64.cc= $(CCC) $(CCFLAGS64) $(CPPFLAGS) -c
707 COMPILE.s= $(AS) $(ASFLAGS) $(AS_CPPFLAGS)
708 COMPILE64.s= $(AS) $(ASFLAGS) $(MACH64)_AS_XARCH $(AS_CPPFLAGS)
709 COMPILE.d= $(DTRACE) -G -32
710 COMPILE64.d= $(DTRACE) -G -64
711 COMPILE.b= $(ELFWRAP) $(ELFWRAP_FLAGS$(CLASS))
712 COMPILE64.b= $(ELFWRAP) $(ELFWRAP_FLAGS$(CLASS))

714 CLASSPATH=
715 COMPILE.java= $(JAVAC) $(JAVAFLAGS) -classpath $(CLASSPATH)

717 #
718 # Link time macros
719 #
720 CCNEEDED = -lc
721 CCEXTNEEDED = -lcRun -lcstd

```

```

722 $(__GNUC)CCNEEDED = -L$(GCCLIBDIR) -lstdc++ -lgcc_s
723 $(__GNUC)CCEXTNEEDED = $(CCNEEDED)

725 LINK.c= $(CC) $(CFLAGS) $(CPPFLAGS) $(LDLFLAGS)
726 LINK64.c= $(CC) $(CFLAGS64) $(CPPFLAGS) $(LDLFLAGS)
727 NORUNPATH= -norunpath -nolib
728 LINK.cc= $(CCC) $(CCFLAGS) $(CPPFLAGS) $(NORUNPATH) \
729 $(LDLFLAGS) $(CCNEEDED)
730 LINK64.cc= $(CCC) $(CCFLAGS64) $(CPPFLAGS) $(NORUNPATH) \
731 $(LDLFLAGS) $(CCNEEDED)

733 #
734 # lint macros
735 #
736 # Note that the undefine of __PRAGMA_REDEFINE_EXTNAME can be removed once
737 # ON is built with a version of lint that has the fix for 4484186.
738 #
739 ALWAYS_LINT_DEFS = -errtags=yes -s
740 ALWAYS_LINT_DEFS += -erroff=E_PTRDIFF_OVERFLOW
741 ALWAYS_LINT_DEFS += -erroff=E_ASSIGN_NARROW_CONV
742 ALWAYS_LINT_DEFS += -U__PRAGMA_REDEFINE_EXTNAME
743 ALWAYS_LINT_DEFS += $(C99LMODE)
744 ALWAYS_LINT_DEFS += -errsecurity=$(SECLEVEL)
745 ALWAYS_LINT_DEFS += -erroff=E_SEC_CREAT_WITHOUT_EXCL
746 ALWAYS_LINT_DEFS += -erroff=E_SEC_FORBIDDEN_WARN_CREAT
747 # XX64 -- really only needed for amd64 lint
748 ALWAYS_LINT_DEFS += -erroff=E_ASSIGN_INT_TO_SMALL_INT
749 ALWAYS_LINT_DEFS += -erroff=E_CAST_INT_CONST_TO_SMALL_INT
750 ALWAYS_LINT_DEFS += -erroff=E_CAST_INT_TO_SMALL_INT
751 ALWAYS_LINT_DEFS += -erroff=E_CAST_TO_PTR_FROM_INT
752 ALWAYS_LINT_DEFS += -erroff=E_COMP_INT_WITH_LARGE_INT
753 ALWAYS_LINT_DEFS += -erroff=E_INTEGRAL_CONST_EXP_EXPECTED
754 ALWAYS_LINT_DEFS += -erroff=E_PASS_INT_TO_SMALL_INT
755 ALWAYS_LINT_DEFS += -erroff=E_PTR_CONV_LOSES_BITS

757 # This forces lint to pick up note.h and sys/note.h from Devpro rather than
758 # from the proto area. The note.h that ON delivers would disable NOTE().
759 ONLY_LINT_DEFS = -I$(SPRO_VROOT)/prod/include/lint

761 SECLEVEL= core
762 LINT.c= $(LINT) $(ONLY_LINT_DEFS) $(LINTFLAGS) $(CPPFLAGS) \
763 $(ALWAYS_LINT_DEFS)
764 LINT64.c= $(LINT) $(ONLY_LINT_DEFS) $(LINTFLAGS64) $(CPPFLAGS) \
765 $(ALWAYS_LINT_DEFS)
766 LINT.s= $(LINT.c)

768 # For some future builds, NATIVE_MACH and MACH might be different.
769 # Therefore, NATIVE_MACH needs to be redefined in the
770 # environment as 'uname -p' to override this macro.
771 #
772 # For now at least, we cross-compile amd64 on i386 machines.
773 NATIVE_MACH= $(MACH:amd64=i386)

775 # Define native compilation macros
776 #

778 # Base directory where compilers are loaded.
779 # Defined here so it can be overridden by developer.
780 #
781 SPRO_ROOT= $(BUILD_TOOLS)/SUNwsprio
782 SPRO_VROOT= $(SPRO_ROOT)/SS12
783 GNU_ROOT= /usr

785 # Till SS12ul formally becomes the NV CBE, LINT is hard
786 # coded to be picked up from the $SPRO_ROOT/sunstudio12.1/
787 # location. Impacted variables are sparc_LINT, sparcv9_LINT,

```

```

788 # i386_LINT, amd64_LINT.
789 # Reset them when SS12ul is rolled out.
790 #

792 # Specify platform compiler versions for languages
793 # that we use (currently only c and c++).
794 #
795 sparc_CC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _cc
796 $(__GNUCC)sparcv9_CC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _gcc
797 sparc_CCC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _CC
798 $(__GNUCC)sparcv9_CCC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _g++
799 sparc_CPP= /usr/ccs/lib/cpp
800 sparc_AS= /usr/ccs/bin/as -xregsym=no
801 sparc_LD= /usr/ccs/bin/ld
802 sparc_LINT= $(SPRO_ROOT)/sunstudio12.1/bin/lint

804 sparcv9_CC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _cc
805 $(__GNUCC64)sparcv9_CC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _gcc
806 sparcv9_CCC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _CC
807 $(__GNUCC64)sparcv9_CCC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _g++
808 sparcv9_CPP= /usr/ccs/lib/cpp
809 sparcv9_AS= /usr/ccs/bin/as -xregsym=no
810 sparcv9_LD= /usr/ccs/bin/ld
811 sparcv9_LINT= $(SPRO_ROOT)/sunstudio12.1/bin/lint

813 i386_CC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _cc
814 $(__GNUCC)i386_CC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _gcc
815 i386_CCC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _CC
816 $(__GNUCC)i386_CCC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _g++
817 i386_CPP= /usr/ccs/lib/cpp
818 i386_AS= /usr/ccs/bin/as
819 $(__GNUCC)i386_AS= $(ONBLD_TOOLS)/bin/$(MACH)/aw
820 i386_LD= /usr/ccs/bin/ld
821 i386_LINT= $(SPRO_ROOT)/sunstudio12.1/bin/lint

823 amd64_CC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _cc
824 $(__GNUCC64)amd64_CC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _gcc
825 amd64_CCC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _CC
826 $(__GNUCC64)amd64_CCC= $(ONBLD_TOOLS)/bin/$(MACH)/cw _g++
827 amd64_CPP= /usr/ccs/lib/cpp
828 amd64_AS= $(ONBLD_TOOLS)/bin/$(MACH)/aw
829 amd64_LD= /usr/ccs/bin/ld
830 amd64_LINT= $(SPRO_ROOT)/sunstudio12.1/bin/lint

832 NATIVECC= $($ (NATIVE_MACH)_CC)
833 NATIVECCC= $($ (NATIVE_MACH)_CCC)
834 NATIVECPP= $($ (NATIVE_MACH)_CPP)
835 NATIVEAS= $($ (NATIVE_MACH)_AS)
836 NATIVELD= $($ (NATIVE_MACH)_LD)
837 NATIVELINT= $($ (NATIVE_MACH)_LINT)

839 #
840 # Makefile.master.64 overrides these settings
841 #
842 CC= $(NATIVECC)
843 CCC= $(NATIVECCC)
844 CPP= $(NATIVECPP)
845 AS= $(NATIVEAS)
846 LD= $(NATIVELD)
847 LINT= $(NATIVELINT)

849 # The real compilers used for this build
850 CW_CC_CMD= $(CC) -_compiler
851 CW_CCC_CMD= $(CCC) -_compiler
852 REAL_CC= $(CW_CC_CMD:sh)
853 REAL_CCC= $(CW_CCC_CMD:sh)

```

```

855 # Pass -Y flag to cpp (method of which is release-dependent)
856 CCYFLAG= -Y I,

858 BDIRECT= -Bdirect
859 BDYNAMIC= -Bdynamic
860 BLOCAL= -Blocal
861 BNODIRECT= -Bnodirect
862 BREDUCE= -Breduce
863 BSTATIC= -Bstatic

865 ZDEFS= -zdefs
866 ZDIRECT= -zdirect
867 ZIGNORE= -zignore
868 ZINITFIRST= -zinitfirst
869 ZINTERPOSE= -zinterpose
870 ZLAZYLOAD= -zlazyload
871 ZLOADFLTR= -zloadfltr
872 ZMULDEFS= -zmuldefs
873 ZNODEFAULTLIB= -znodefaultlib
874 ZNODEFS= -znodefs
875 ZNODELETE= -znodelete
876 ZNODLOPEN= -znodlopen
877 ZNODUMP= -znodump
878 ZNOLAZYLOAD= -znolazyload
879 ZNOLDYNSYM= -znolddynsym
880 ZNORELOC= -znoreloc
881 ZNOVERSION= -znoverion
882 ZRECORD= -zrecord
883 ZREDLOCSYM= -zredlocsymb
884 ZTEXT= -ztext
885 ZVERBOSE= -zverbose

887 GSHARED= -G
888 CCMT= -mt

890 # Handle different PIC models on different ISAs
891 # (May be overridden by lower-level Makefiles)

893 sparc_C_PICFLAGS = -K pic
894 sparcv9_C_PICFLAGS = -K pic
895 i386_C_PICFLAGS = -K pic
896 amd64_C_PICFLAGS = -K pic
897 C_PICFLAGS = $($ (MACH)_C_PICFLAGS)
898 C_PICFLAGS64 = $($ (MACH64)_C_PICFLAGS)

900 sparc_C_BIGPICFLAGS = -K PIC
901 sparcv9_C_BIGPICFLAGS = -K PIC
902 i386_C_BIGPICFLAGS = -K PIC
903 amd64_C_BIGPICFLAGS = -K PIC
904 C_BIGPICFLAGS = $($ (MACH)_C_BIGPICFLAGS)
905 C_BIGPICFLAGS64 = $($ (MACH64)_C_BIGPICFLAGS)

907 # CC requires there to be no space between '-K' and 'pic' or 'PIC'.
908 sparc_CC_PICFLAGS = -Kpic
909 sparcv9_CC_PICFLAGS = -KPIC
910 i386_CC_PICFLAGS = -Kpic
911 amd64_CC_PICFLAGS = -Kpic
912 CC_PICFLAGS = $($ (MACH)_CC_PICFLAGS)
913 CC_PICFLAGS64 = $($ (MACH64)_CC_PICFLAGS)

915 AS_PICFLAGS= $(C_PICFLAGS)
916 AS_BIGPICFLAGS= $(C_BIGPICFLAGS)

918 #
919 # Default label for CTF sections

```

```

920 #
921 CTFCVTFLAGS=          -i -L VERSION

923 #
924 # Override to pass module-specific flags to ctfmerge.  Currently used only by
925 # krtld to turn on fuzzy matching, and source-level debugging to inhibit
926 # stripping.
927 #
928 CTFMRGFLAGS=

930 CTFCONVERT_O          = $(CTFCONVERT) $(CTFCVTFLAGS) $@

932 # Rules (normally from make.rules) and macros which are used for post
933 # processing files.  Normally, these do stripping of the comment section
934 # automatically.
935 #   RELEASE_CM:          Should be edited to reflect the release.
936 #   POST_PROCESS_O:     Post-processing for '.o' files.
937 #   POST_PROCESS_A:     Post-processing for '.a' files (currently null).
938 #   POST_PROCESS_SO:    Post-processing for '.so' files.
939 #   POST_PROCESS:       Post-processing for executable files (no suffix).
940 # Note that these macros are not completely generalized as they are to be
941 # used with the file name to be processed following.
942 #
943 # It is left as an exercise to Release Engineering to embellish the generation
944 # of the release comment string.
945 #
946 #   If this is a standard development build:
947 #       compress the comment section (mcs -c)
948 #       add the standard comment (mcs -a $(RELEASE_CM))
949 #       add the development specific comment (mcs -a $(DEV_CM))
950 #
951 #   If this is an installation build:
952 #       delete the comment section (mcs -d)
953 #       add the standard comment (mcs -a $(RELEASE_CM))
954 #       add the development specific comment (mcs -a $(DEV_CM))
955 #
956 #   If this is an release build:
957 #       delete the comment section (mcs -d)
958 #       add the standard comment (mcs -a $(RELEASE_CM))
959 #
960 # The following list of macros are used in the definition of RELEASE_CM
961 # which is used to label all binaries in the build:
962 #
963 #   RELEASE             Specific release of the build, eg: 5.2
964 #   RELEASE_MAJOR      Major version number part of $(RELEASE)
965 #   RELEASE_MINOR      Minor version number part of $(RELEASE)
966 #   VERSION             Version of the build (alpha, beta, Generic)
967 #   PATCHID            If this is a patch this value should contain
968 #                       the patchid value (eg: "Generic 100832-01"), otherwise
969 #                       it will be set to $(VERSION)
970 #   RELEASE_DATE       Date of the Release Build
971 #   PATCH_DATE         Date the patch was created, if this is blank it
972 #                       will default to the RELEASE_DATE
973 #
974 RELEASE_MAJOR= 5
975 RELEASE_MINOR= 11
976 RELEASE= $(RELEASE_MAJOR).$(RELEASE_MINOR)
977 VERSION= SunOS Development
978 PATCHID= $(VERSION)
979 RELEASE_DATE= release date not set
980 PATCH_DATE= $(RELEASE_DATE)
981 RELEASE_CM= "@($ (POUND_SIGN))SunOS $(RELEASE) $(PATCHID) $(PATCH_DATE)"
982 DEV_CM= "@($ (POUND_SIGN))SunOS Internal Development: non-nightly build"

984 PROCESS_COMMENT= @?${MCS} -d -a $(RELEASE_CM) -a $(DEV_CM)
985 $(RELEASE_BUILD)PROCESS_COMMENT= @?${MCS} -d -a $(RELEASE_CM)

```

```

987 STRIP_STABS=          $(STRIP) -x $@
988 $(SRCDBGBLD)STRIP_STABS=
:

990 POST_PROCESS_O=
991 POST_PROCESS_A=
992 POST_PROCESS_SO=      $(PROCESS_COMMENT) $@ ; $(STRIP_STABS) ; \
993                       $(ELFSIGN_OBJECT)
994 POST_PROCESS=         $(PROCESS_COMMENT) $@ ; $(STRIP_STABS) ; \
995                       $(ELFSIGN_OBJECT)

997 #
998 # chk4ubin is a tool that inspects a module for a symbol table
999 # ELF section size which can trigger an OBP bug on older platforms.
1000 # This problem affects only specific sun4u bootable modules.
1001 #
1002 CHK4UBIN=             $(ONBLD_TOOLS)/bin/$(MACH)/chk4ubin
1003 CHK4UBINFLAGS=
1004 CHK4UBINARY=          $(CHK4UBIN) $(CHK4UBINFLAGS) $@

1006 #
1007 # PKGARCHIVE specifies the default location where packages should be
1008 # placed if built.
1009 #
1010 $(RELEASE_BUILD)PKGARCHIVESUFFIX= -nd
1011 PKGARCHIVE=$(SRC)/../../packages/$(MACH)/nightly$(PKGARCHIVESUFFIX)

1013 #
1014 # The repositories will be created with these publisher settings.  To
1015 # update an image to the resulting repositories, this must match the
1016 # publisher name provided to "pkg set-publisher."
1017 #
1018 PKGPUBLISHER_REDIST= on-nightly
1019 PKGPUBLISHER_NONREDIST= on-extra

1021 #   Default build rules which perform comment section post-processing.
1022 #
1023 .c:
1024     $(LINK.c) -o $@ $< $(LDLIBS)
1025     $(POST_PROCESS)
1026 .c.o:
1027     $(COMPILE.c) $(OUTPUT_OPTION) $< $(CTFCONVERT_HOOK)
1028     $(POST_PROCESS_O)
1029 .c.a:
1030     $(COMPILE.c) -o $% $<
1031     $(PROCESS_COMMENT) $%
1032     $(AR) $(ARFLAGS) $@ $%
1033     $(RM) $%
1034 .s.o:
1035     $(COMPILE.s) -o $@ $<
1036     $(POST_PROCESS_O)
1037 .s.a:
1038     $(COMPILE.s) -o $% $<
1039     $(PROCESS_COMMENT) $%
1040     $(AR) $(ARFLAGS) $@ $%
1041     $(RM) $%
1042 .cc:
1043     $(LINK.cc) -o $@ $< $(LDLIBS)
1044     $(POST_PROCESS)
1045 .cc.o:
1046     $(COMPILE.cc) $(OUTPUT_OPTION) $<
1047     $(POST_PROCESS_O)
1048 .cc.a:
1049     $(COMPILE.cc) -o $% $<
1050     $(AR) $(ARFLAGS) $@ $%
1051     $(PROCESS_COMMENT) $%

```



```

1052      $(RM) $%
1053 .y:
1054      $(YACC.y) $<
1055      $(LINK.c) -o $@ y.tab.c $(LDLIBS)
1056      $(POST_PROCESS)
1057      $(RM) y.tab.c
1058 .y.o:
1059      $(YACC.y) $<
1060      $(COMPILE.c) -o $@ y.tab.c $(CTFCONVERT_HOOK)
1061      $(POST_PROCESS_O)
1062      $(RM) y.tab.c
1063 .l:
1064      $(RM) $*.c
1065      $(LEX.l) $< > $*.c
1066      $(LINK.c) -o $@ $*.c -ll $(LDLIBS)
1067      $(POST_PROCESS)
1068      $(RM) $*.c
1069 .l.o:
1070      $(RM) $*.c
1071      $(LEX.l) $< > $*.c
1072      $(COMPILE.c) -o $@ $*.c $(CTFCONVERT_HOOK)
1073      $(POST_PROCESS_O)
1074      $(RM) $*.c

1076 .bin.o:
1077      $(COMPILE.b) -o $@ $<
1078      $(POST_PROCESS_O)

1080 .java.class:
1081      $(COMPILE.java) $<

1083 # Bourne and Korn shell script message catalog build rules.
1084 # We extract all gettext strings with sed(1) (being careful to permit
1085 # multiple gettext strings on the same line), weed out the dups, and
1086 # build the catalogue with awk(1).

1088 .sh.po .ksh.po:
1089      $(SED) -n -e ":a" \
1090              -e "h" \
1091              -e "s/. *gettext *\([^\"]*\).*\/\1/p" \
1092              -e "x" \
1093              -e "s/\(.*\)gettext *\([^\"]*\)*\(\(.*\)\/\1\2/" \
1094              -e "t a" \
1095      $< | sort -u | $(AWK) '{ print "msgid\t" $$0 "\nmsgstr" }' > $@

1097 #
1098 # Python and Perl executable and message catalog build rules.
1099 #
1100 .SUFFIXES: .pl .pm .py .pyc

1102 .pl:
1103      $(RM) $@;
1104      $(SED) -e "s@TEXT_DOMAIN@"$(TEXT_DOMAIN)\@" $< > $@;
1105      $(CHMOD) +x $@

1107 .py:
1108      $(RM) $@; $(SED) -e "1s:^\#@PYTHON@:\#@$(PYTHON):" < $< > $@; $(CHMOD)

1110 .py.pyc:
1111      $(RM) $@
1112      $(PYTHON) -mpy_compile $<
1113      @[ $(<)c = $@ ] || $(MV) $(<)c $@

1115 .py.po:
1116      $(GNUXGETTEXT) $(GNUXGETFLAGS) -d $(<F:%.py=) $< ;

```

```

1118 .pl.po .pm.po:
1119      $(XGETTEXT) $(XGETFLAGS) -d $(<F) $< ;
1120      $(RM) $@ ;
1121      $(SED) "/^domain/d" < $(<F).po > $@ ;
1122      $(RM) $(<F).po

1124 #
1125 # When using xgettext, we want messages to go to the default domain,
1126 # rather than the specified one. This special version of the
1127 # COMPILE.cpp macro effectively prevents expansion of TEXT_DOMAIN,
1128 # causing xgettext to put all messages into the default domain.
1129 #
1130 CPPFORPO=$(COMPILE.cpp:\$(TEXT_DOMAIN)\="TEXT_DOMAIN)

1132 .c.i:
1133      $(CPPFORPO) $< > $@

1135 .h.i:
1136      $(CPPFORPO) $< > $@

1138 .y.i:
1139      $(YACC) -d $<
1140      $(CPPFORPO) y.tab.c > $@
1141      $(RM) y.tab.c

1143 .l.i:
1144      $(LEX) $<
1145      $(CPPFORPO) lex.yy.c > $@
1146      $(RM) lex.yy.c

1148 .c.po:
1149      $(CPPFORPO) $< > $<.i
1150      $(BUILD.po)

1152 .cc.po:
1153      $(CPPFORPO) $< > $<.i
1154      $(BUILD.po)

1156 .y.po:
1157      $(YACC) -d $<
1158      $(CPPFORPO) y.tab.c > $<.i
1159      $(BUILD.po)
1160      $(RM) y.tab.c

1162 .l.po:
1163      $(LEX) $<
1164      $(CPPFORPO) lex.yy.c > $<.i
1165      $(BUILD.po)
1166      $(RM) lex.yy.c

1168 #
1169 # Rules to perform stylistic checks
1170 #
1171 .SUFFIXES: .x .xml .check .xmlchk

1173 .h.check:
1174      $(DOT_H_CHECK)

1176 .x.check:
1177      $(DOT_X_CHECK)

1179 .xml.xmlchk:
1180      $(MANIFEST_CHECK)

1182 #
1183 # Include rules to render automated sccs get rules "safe".

```

new/usr/src/Makefile.master

19

```
1184 #  
1185 include $(SRC)/Makefile.noget
```

new/usr/src/cmd/fs.d/smbclnt/smbutil/Makefile

1

```
*****
2155 Sun Mar 18 01:13:14 2018
new/usr/src/cmd/fs.d/smbclnt/smbutil/Makefile
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...
*****
1 #
2 # CDDL HEADER START
3 #
4 # The contents of this file are subject to the terms of the
5 # Common Development and Distribution License (the "License").
6 # You may not use this file except in compliance with the License.
7 #
8 # You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9 # or http://www.opensolaris.org/os/licensing.
10 # See the License for the specific language governing permissions
11 # and limitations under the License.
12 #
13 # When distributing Covered Code, include this CDDL HEADER in each
14 # file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 # If applicable, add the following below this CDDL HEADER, with the
16 # fields enclosed by brackets "[]" replaced with your own identifying
17 # information: Portions Copyright [yyyy] [name of copyright owner]
18 #
19 # CDDL HEADER END
20 #
21 #
22 #
23 # Copyright 2009 Sun Microsystems, Inc. All rights reserved.
24 # Use is subject to license terms.
25 #
26 # Copyright 2013 Nexenta Systems, Inc. All rights reserved.
27 #
28 #
29 #
30 # cmd/fs.d/smbclnt/smbutil/Makefile
31 #
32 #
33 PROG=          smbutil
34 #
35 OBJS=  smbutil.o info.o login.o lookup.o print.o status.o view.o \
36        shares_rap.o shares_rpc.o srvsvc1_clnt.o srvsvc1_ndr.o
37 #
38 SRCS=  ${OBJS:%.o=%.c}
39 #
40 include         $(SRC)/cmd/Makefile.cmd
41 #
42 OBJS=  smbutil.o login.o lookup.o print.o status.o view.o
43 #
44 SRCS=  ${OBJS:%.o=%.c}
45 POFILE= smbutil_all.po
46 POFILES= ${OBJS:%.o=%.po}
47 #
48 CLEANFILES +=  srvsvc1_ndr.c
49 CLOBBERFILES+= $(POFILE) $(POFILES)
50 #
51 CSTD= $(CSTD_GNU99)
52 #
53 LDLIBS += -lmlrpc -lmbfs -lnsl
54 LDLIBS += -lmbfs -lnsl
55 #
56 CPPFLAGS += -I$(SRC)/lib/libmbfs \
57            -I$(SRC)/uts/common/smbclnt -I$(SRC)/uts/common
58 # Debugging
59 ${NOT_RELEASE_BUILD} CPPFLAGS += -DDEBUG
```

new/usr/src/cmd/fs.d/smbclnt/smbutil/Makefile

2

```
58 # uncomment these for dbx debugging
59 #COPTFLAG = -g
60 #CTF_FLAGS =
61 #CTFCONVERT_O=
62 #CTFMERGE_LIB=
63 #
64 # disable some of the less important lint
65 LINTFLAGS      += -erroff=E_FUNC_RET_ALWAYS_IGNORE2
66 LINTFLAGS      += -erroff=E_FUNC_RET_MAYBE_IGNORED2
67 #
68 all:           $(PROG)
69 #
70 $(PROG):      $(OBJS)
71               $(LINK.c) -o $@ $(OBJS) $(LDLIBS)
72               $(POST_PROCESS)
73 #
74 install:      all $(ROOTPROG)
75 #
76 $(ROOTPROG): $(PROG)
77               $(INS.file) $(PROG)
78 #
79 catalog:     $(POFILE)
80 #
81 $(POFILE):   $(POFILES)
82               $(RM) $@
83               $(CAT) $(POFILES) > $@
84 #
85 lint:        lint_SRCS
86 #
87 clean:
88               $(RM) $(OBJS) $(CLEANFILES)
89 #
90 clean :
91               $(RM) $(OBJS)
92 #
93 include ../../../../Makefile.targ
94 #
95 srvsvc1_ndr.c : srvsvc1.ndl
96                 $(NDRGEN) -Y $(ANSI_CPP) $(CPPFLAGS) srvsvc1.ndl
97 #
98 .KEEP_STATE:
99 #
100 include ../../../../Makefile.targ
```

```

*****
2830 Sun Mar 18 01:13:14 2018
new/usr/src/cmd/fs.d/smbclnt/smbutil/common.h
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...
*****
1 /*
2  * Copyright (c) 2000, Boris Popov
3  * All rights reserved.
4  *
5  * Redistribution and use in source and binary forms, with or without
6  * modification, are permitted provided that the following conditions
7  * are met:
8  * 1. Redistributions of source code must retain the above copyright
9  * notice, this list of conditions and the following disclaimer.
10 * 2. Redistributions in binary form must reproduce the above copyright
11 * notice, this list of conditions and the following disclaimer in the
12 * documentation and/or other materials provided with the distribution.
13 * 3. All advertising materials mentioning features or use of this software
14 * must display the following acknowledgement:
15 * This product includes software developed by Boris Popov.
16 * 4. Neither the name of the author nor the names of any co-contributors
17 * may be used to endorse or promote products derived from this software
18 * without specific prior written permission.
19 *
20 * THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND
21 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
22 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
23 * ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
24 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
25 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
26 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
27 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
28 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
29 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
30 * SUCH DAMAGE.
31 */

33 /*
34  * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
35 */

37 #ifndef _SMBUTIL_COMMON_H
38 #define _SMBUTIL_COMMON_H

40 #ifdef __cplusplus
41 extern "C" {
42 #endif

44 #include <stdio.h>
45 #include <stdlib.h>

47 int cmd_crypt(int argc, char *argv[]);
48 int cmd_help(int argc, char *argv[]);
49 int cmd_info(int argc, char *argv[]);
50 int cmd_login(int argc, char *argv[]);
51 int cmd_logout(int argc, char *argv[]);
52 int cmd_logoutall(int argc, char *argv[]);
53 int cmd_lookup(int argc, char *argv[]);
54 int cmd_print(int argc, char *argv[]);
55 int cmd_status(int argc, char *argv[]);
56 int cmd_view(int argc, char *argv[]);

58 void crypt_usage(void);
59 /* No crypt_usage? */
59 void help_usage(void);

```

```

60 void info_usage(void);
61 void login_usage(void);
62 void logout_usage(void);
63 void logoutall_usage(void);
64 void lookup_usage(void);
65 void print_usage(void);
66 void status_usage(void);
67 void view_usage(void);

69 /* See view.c */
70 int share_enum_rpc(struct smb_ctx *ctx);
71 int share_enum_rpc(struct smb_ctx *ctx, char *server);
72 void view_print_share(char *share, int type, char *comment);
73 extern int loadsmbvfs();

74 #ifdef __cplusplus
75 }
_____ unchanged_portion_omitted_____

```

```

*****
4575 Sun Mar 18 01:13:14 2018
new/usr/src/cmd/fs.d/smbclnt/smbutil/info.c
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23 * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
24 * Use is subject to license terms.
25 *
26 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
27 */

29 /*
30 * Show information about the remote server, as offered by
31 * NetServerGetInfo with SERVER_INFO_101
32 */

34 #include <sys/types.h>

36 #include <errno.h>
37 #include <stdio.h>
38 #include <stdlib.h>
39 #include <string.h>
40 #include <libintl.h>

42 #include <libmlrpc/libmlrpc.h>
43 #include <netsmb/smb_lib.h>
44 #include "srvsvcl_clnt.h"
45 #include "common.h"

48 static int get_info(smb_ctx_t *);

50 void
51 info_usage(void)
52 {
53     printf(gettext("usage: smbutil info [connection options] //"
54                 "[workgroup;][user[:password]@]server\n"));
55     exit(1);
56 }

58 int
59 cmd_info(int argc, char *argv[])
60 {

```

```

61     struct smb_ctx *ctx;
62     int error, err2, opt;

64     if (argc < 2)
65         info_usage();

67     error = smb_ctx_alloc(&ctx);
68     if (error)
69         return (error);

71     error = smb_ctx_scan_argv(ctx, argc, argv,
72                             SMBL_SERVER, SMBL_SERVER, USE_WILDCARD);
73     if (error)
74         goto out;

76     error = smb_ctx_readrc(ctx);
77     if (error)
78         goto out;

80     while ((opt = getopt(argc, argv, STDPARAM_OPT)) != EOF) {
81         if (opt == '?')
82             info_usage();
83         error = smb_ctx_opt(ctx, opt, optarg);
84         if (error)
85             goto out;
86     }

88     smb_ctx_setshare(ctx, "IPC$", USE_IPC);

90     /*
91     * Resolve the server address,
92     * setup derived defaults.
93     */
94     error = smb_ctx_resolve(ctx);
95     if (error)
96         goto out;

98     /*
99     * Have server, share, etc. from above:
100    * smb_ctx_scan_argv, option settings.
101    * Get the session and tree.
102    */
103    again:
104    error = smb_ctx_get_ssn(ctx);
105    if (error == EAUTH) {
106        err2 = smb_get_authentication(ctx);
107        if (err2 == 0)
108            goto again;
109    }
110    if (error) {
111        smb_error(gettext("/%s: login failed"),
112                error, ctx->ct_fullserver);
113        goto out;
114    }

116    error = smb_ctx_get_tree(ctx);
117    if (error) {
118        smb_error(gettext("/%s/%s: tree connect failed"),
119                error, ctx->ct_fullserver, ctx->ct_origshare);
120        goto out;
121    }

123    /*
124    * Have IPC$ tcon. Get the server info.
125    */
126    error = get_info(ctx);

```

```

127     if (error)
128         smb_error("cannot get server info.", error);

130 out:
131     smb_ctx_free(ctx);
132     return (error);
133 }

135 int
136 get_info(smb_ctx_t *ctx)
137 {
138     char pf_unk[32];
139     mlrpc_handle_t handle;
140     ndr_service_t *svc;
141     union mslm_NetServerGetInfo_ru res;
142     struct mslm_SERVER_INFO_101 *sv101;
143     char *platform_name;
144     int err;

146     /*
147      * Create an RPC handle using the smb_ctx we already have.
148      * Just local allocation and initialization.
149      */
150     srvsvcl_initialize();
151     svc = ndr_svc_lookup_name("srvsvc");
152     if (svc == NULL)
153         return (ENOENT);

155     err = mlrpc_clh_create(&handle, ctx);
156     if (err)
157         return (err);

159     /*
160      * Try to bind to the RPC service.  If it fails,
161      * just return the error and the caller will
162      * fall back to RAP.
163      */
164     err = mlrpc_clh_bind(&handle, svc);
165     if (err)
166         goto out;

168     err = srvsvc_net_server_getinfo(&handle,
169         ctx->ct_fullserver, 101, &res);
170     if (err)
171         goto out;

173     sv101 = res.info101;

175     switch (sv101->sv101_platform_id) {
176     case SV_PLATFORM_ID_DOS:
177         platform_name = "DOS";
178         break;
179     case SV_PLATFORM_ID_OS2:
180         platform_name = "OS2";
181         break;
182     case SV_PLATFORM_ID_NT:
183         platform_name = "NT";
184         break;
185     case SV_PLATFORM_ID_OSF:
186         platform_name = "OSF";
187         break;
188     case SV_PLATFORM_ID_VMS:
189         platform_name = "VMS";
190         break;
191     default:
192         platform_name = pf_unk;

```

```

193         snprintf(pf_unk, sizeof (pf_unk), "(%d)",
194             sv101->sv101_platform_id);
195         break;
196     }

198     printf("server info:\n");
199     printf(" platform_id %s\n", platform_name);
200     printf(" vers.major %d\n", sv101->sv101_version_major);
201     printf(" vers.minor %d\n", sv101->sv101_version_minor);

203     if (smb_verbose)
204         printf(" type_flags 0x%x\n", sv101->sv101_type);

206     printf(" name    \"%s\"\n", sv101->sv101_name);
207     printf(" comment \"%s\"\n", sv101->sv101_comment);

209 out:
210     (void) mlrpc_clh_free(&handle);
211     return (err);
212 }

```

```

*****
4279 Sun Mar 18 01:13:14 2018
new/usr/src/cmd/fs.d/smbclnt/smbutil/shares_rap.c
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...
*****
1 /*
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3  * All rights reserved.
4  *
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6  * modification, are permitted provided that the following conditions
7  * are met:
8  * 1. Redistributions of source code must retain the above copyright
9  * notice, this list of conditions and the following disclaimer.
10 * 2. Redistributions in binary form must reproduce the above copyright
11 * notice, this list of conditions and the following disclaimer in the
12 * documentation and/or other materials provided with the distribution.
13 * 3. All advertising materials mentioning features or use of this software
14 * must display the following acknowledgement:
15 * This product includes software developed by Boris Popov.
16 * 4. Neither the name of the author nor the names of any co-contributors
17 * may be used to endorse or promote products derived from this software
18 * without specific prior written permission.
19 *
20 * THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND
21 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
22 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
23 * ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
24 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
25 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
26 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
27 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
28 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
29 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
30 * SUCH DAMAGE.
31 *
32 * from: Id: view.c,v 1.9 2002/02/20 09:26:42 bp Exp
33 */

35 /*
36  * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
37 */

39 #include <errno.h>
40 #include <stdio.h>
41 #include <stdlib.h>
42 #include <string.h>

44 #include <netsmb/mchain.h> /* letohs, etc. */
45 #include <netsmb/smb.h>
46 #include <netsmb/smb_lib.h>
47 #include <netsmb/smb_rap.h>

49 #include "common.h"

51 /*
52  * Enumerate shares using Remote Administration Protocol (RAP)
53  * Was in libsmfbs netshareenum.c
54 */

56 struct smb_share_info_1 {
57     char        shil_netname[13];
58     char        shil_pad;
59     uint16_t    shil_type;
60     uint32_t    shil_remark; /* char * */

```

```

61 };

63 static int
64 smb_rap_NetShareEnum(struct smb_ctx *ctx, int sLevel, void *pbBuffer,
65                     int *cbBuffer, int *pcEntriesRead, int *pcTotalAvail)
66 {
67     struct smb_rap *rap;
68     long lval = -1;
69     int error;

71     error = smb_rap_create(0, "WrLeh", "B13BWz", &rap);
72     if (error)
73         return (error);
74     smb_rap_setNparam(rap, sLevel); /* W - sLevel */
75     smb_rap_setPparam(rap, pbBuffer); /* r - pbBuffer */
76     smb_rap_setNparam(rap, *cbBuffer); /* L - cbBuffer */
77     error = smb_rap_request(rap, ctx);
78     if (error == 0) {
79         *pcEntriesRead = rap->r_entries;
80         error = smb_rap_getNparam(rap, &lval);
81         *pcTotalAvail = lval;
82         /* Copy the data length into the IN/OUT variable. */
83         *cbBuffer = rap->r_rcvbuflen;
84     }
85     error = smb_rap_error(rap, error);
86     smb_rap_done(rap);
87     return (error);
88 }

90 int
91 share_enum_rap(smb_ctx_t *ctx)
92 {
93     struct smb_share_info_1 *shi;
94     void *rdbuf;
95     char *cp;
96     int error, bufsize, i, rcnt, total;
97     int lbound, rbound;
98     uint16_t type;

100     bufsize = 0xfffe; /* samba notes win2k bug for 65535 */
101     rdbuf = malloc(bufsize);
102     if (rdbuf == NULL)
103         return (errno);

105     error = smb_rap_NetShareEnum(ctx, 1, rdbuf, &bufsize, &rcnt, &total);
106     if (error &&
107         error != (ERROR_MORE_DATA | SMB_RAP_ERROR))
108         goto out;

110     /*
111      * Bounds for offsets to comments strings.
112      * After the array, and before the end.
113      */
114     lbound = rcnt * (sizeof (struct smb_share_info_1));
115     rbound = bufsize;

117     /* Print the header line. */
118     view_print_share(NULL, 0, NULL);

120     for (shi = rdbuf, i = 0; i < rcnt; i++, shi++) {
121         type = letohs(shi->shil_type);

123         shi->shil_pad = '\0'; /* ensure null termination */

125         /*
126          * Offsets to comment strings can be trash.

```

```
127     * Only print when the offset is valid.
128     */
129     if (shi->shil_remark >= lbound &&
130         shi->shil_remark < rbound) {
131         cp = (char *)rpbuf + shi->shil_remark;
132     } else
133         cp = NULL;

135     /* Convert from OEM to local codeset? */
136     view_print_share(shi->shil_netname, type, cp);
137 }
138 error = 0;

140 out:
141     free(rpbuf);
142     return (error);
143 }
```


new/usr/src/cmd/fs.d/smbclnt/smbutil/shares_rpc.c

1

1895 Sun Mar 18 01:13:14 2018

new/usr/src/cmd/fs.d/smbclnt/smbutil/shares_rpc.c

3328 smbutil view doesn't work with Win2008 and later

requires 1575 untangle libmlrpc ...

```
1 /*
2  * This file and its contents are supplied under the terms of the
3  * Common Development and Distribution License ("CDDL"), version 1.0.
4  * You may only use this file in accordance with the terms of version
5  * 1.0 of the CDDL.
6  *
7  * A full copy of the text of the CDDL should have accompanied this
8  * source. A copy of the CDDL is also available via the Internet at
9  * http://www.illumos.org/license/CDDL.
10 */
12 /*
13  * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
14 */
16 /*
17  * Share enumeration using Remote Procedure Call (RPC)
18 */
20 #include <sys/types.h>
22 #include <errno.h>
23 #include <stdio.h>
24 #include <stdlib.h>
25 #include <string.h>
27 #include <libmlrpc/libmlrpc.h>
28 #include <netsmb/smbfs_api.h>
29 #include "srvsvcl_clnt.h"
30 #include "common.h"
32 int
33 share_enum_rpc(struct smb_ctx *ctx, char *server)
34 {
35     mlrpc_handle_t handle;
36     ndr_service_t *svc;
37     union mslm_NetShareEnum_ru res;
38     struct mslm_NetShareInfo_l *nsil;
39     int err, i, count;
41     /*
42      * Create an RPC handle using the smb_ctx we already have.
43      * Just local allocation and initialization.
44      */
45     srvsvcl_initialize();
46     svc = ndr_svc_lookup_name("srvsvc");
47     if (svc == NULL)
48         return (ENOENT);
50     err = mlrpc_clh_create(&handle, ctx);
51     if (err)
52         return (err);
54     /*
55      * Try to bind to the RPC service. If it fails,
56      * just return the error and the caller will
57      * fall back to RAP.
58      */
59     err = mlrpc_clh_bind(&handle, svc);
60     if (err)
```

new/usr/src/cmd/fs.d/smbclnt/smbutil/shares_rpc.c

2

```
61         goto out;
63     err = srvsvc_net_share_enum(&handle, server, 1, &res);
64     if (err)
65         goto out;
67     /* Print the header line. */
68     view_print_share(NULL, 0, NULL);
70     /* Print the share list. */
71     count = res.bufptr1->entriesread;
72     i = 0, nsil = res.bufptr1->entries;
73     while (i < count) {
74         /* Convert UTF-8 to local code set? */
75         view_print_share((char *)nsil->shil_netname,
76                         nsil->shil_type, (char *)nsil->shil_comment);
77         i++, nsil++;
78     }
80 out:
81     (void) mlrpc_clh_free(&handle);
82     return (err);
83 }
```

```

*****
5424 Sun Mar 18 01:13:14 2018
new/usr/src/cmd/fs.d/smbclnt/smbutil/smbutil.c
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...
*****
1 /*
2  * Copyright (c) 2000, Boris Popov
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4  *
5  * Redistribution and use in source and binary forms, with or without
6  * modification, are permitted provided that the following conditions
7  * are met:
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9  * notice, this list of conditions and the following disclaimer.
10 * 2. Redistributions in binary form must reproduce the above copyright
11 * notice, this list of conditions and the following disclaimer in the
12 * documentation and/or other materials provided with the distribution.
13 * 3. All advertising materials mentioning features or use of this software
14 * must display the following acknowledgement:
15 * This product includes software developed by Boris Popov.
16 * 4. Neither the name of the author nor the names of any co-contributors
17 * may be used to endorse or promote products derived from this software
18 * without specific prior written permission.
19 *
20 * THIS SOFTWARE IS PROVIDED BY THE AUTHOR AND CONTRIBUTORS ``AS IS'' AND
21 * ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE
22 * IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE
23 * ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE
24 * FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL
25 * DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS
26 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
27 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
28 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
29 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
30 * SUCH DAMAGE.
31 */

33 /*
34  * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
35  * Use is subject to license terms.
36  *
37  * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
38  */

40 #include <sys/param.h>
41 #include <sys/time.h>
42 #include <stdio.h>
43 #include <string.h>
44 #include <unistd.h>
45 #include <stdlib.h>
46 #include <err.h>
47 #include <sysexits.h>
48 #include <locale.h>
49 #include <libintl.h>

51 #include <netsmb/smb_lib.h>

53 #include "common.h"

55 #ifndef EX_DATAERR
56 #define EX_DATAERR 1
57 #endif

59 static void help(void);

```

```

62 typedef int cmd_fn_t (int argc, char *argv[]);
63 typedef void cmd_usage_t (void);

65 #define CMDFL_NO_KMOD 0x0001

67 static struct commands {
68     const char    *name;
69     cmd_fn_t      *fn;
70     cmd_usage_t   *usage;
71     int           flags;
72 } commands[] = {
73     {"crypt",      cmd_crypt,      NULL, CMDFL_NO_KMOD},
74     {"help",       cmd_help,       help_usage, CMDFL_NO_KMOD},
75     {"info",       cmd_info,       info_usage, 0},
76     {"login",      cmd_login,      login_usage, 0},
77     {"logout",     cmd_logout,     logout_usage, 0},
78     {"logoutall",  cmd_logoutall,  logoutall_usage, 0},
79     {"lookup",     cmd_lookup,     lookup_usage, CMDFL_NO_KMOD},
80     {"print",      cmd_print,      print_usage, 0},
81     {"status",     cmd_status,     status_usage, CMDFL_NO_KMOD},
82     {"view",       cmd_view,       view_usage, 0},
83     {NULL, NULL, NULL, 0}
84 };
      unchanged portion omitted

187 static void
188 help(void) {
189     printf("\n");
190     printf(gettext("usage: %s [-hv] subcommand [args]\n"), __progname);
191     printf(gettext("where subcommands are:\n"));
192     " crypt          slightly obscure password\n"
193     " help           display help on specified subcommand\n"
194     /* " lc          display active connections\n" */
195     " info          display server type and version\n"
196     " login         login to specified host\n"
197     " logout        logout from specified host\n"
198     " logoutall     logout all users (requires privilege)\n"
199     " lookup        resolve NetBIOS name to IP address\n"
200     " print         print file to the specified remote printer\n"
201     " status        resolve IP address or DNS name to NetBIOS names\n"
202     " view         list resources on specified host\n"
203     "\n");
204     exit(1);
205 }
      unchanged portion omitted

```

```

*****
4181 Sun Mar 18 01:13:14 2018
new/usr/src/cmd/fs.d/smbclnt/smbutil/srvsvcl.ndl
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
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17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
24 */

26 /*
27 * SRVSVC - Server Service (partial)
28 *
29 * This module needs only NetShareEnum (levels 0, 1)
30 * and NetServerGetInfo (levels 100, 101)
31 */

33 #include <libmlrpc/ndrtypes.ndl>

35 /*
36 * SRVSVC - Server Service
37 */

39 #define SRVSVC_OPNUM_NetShareEnum          0x0f
40 #define SRVSVC_OPNUM_NetServerGetInfo     0x15

42 /*
43 * SRVSVC NetShareEnum (
44 *   IN LPTSTR   servername,
45 *   IN DWORD    level;
46 *   OUT union switch(level) {
47 *     case 0: struct {
48 *       DWORD entriesread;
49 *       [size_is(entriesread)]
50 *       _SHARE_INFO_0 *entries;
51 *     } *bufptr0;
52 *     case 1: struct {
53 *       DWORD entriesread;
54 *       [size_is(entriesread)]
55 *       _SHARE_INFO_1 *entries;
56 *     } *bufptr1;
57 *     ...
58 *   } bufptr,
59 *   IN DWORD    pefmaxlen,
60 *   OUT DWORD   totalentries,

```

```

61 *   IN OUT DWORD ?* resume_handle,
62 *   OUT DWORD    status
63 *   )
64 */

66 struct mslm_NetShareInfo_0 {
67     LPTSTR shi0_netname;
68 };
69 struct mslm_NetShareInfo_0_result {
70     DWORD entriesread;
71     SIZE_IS(entriesread)
72     struct mslm_NetShareInfo_0 *entries;
73 };

75 struct mslm_NetShareInfo_1 {
76     LPTSTR shi1_netname;
77     DWORD shi1_type; /* type of resource such as IPC$ */
78     LPTSTR shi1_comment;
79 };
80 struct mslm_NetShareInfo_1_result {
81     DWORD entriesread;
82     SIZE_IS(entriesread)
83     struct mslm_NetShareInfo_1 *entries;
84 };

86 union mslm_NetShareEnum_ru {
87     CASE(0) struct mslm_NetShareInfo_0_result *bufptr0;
88     CASE(1) struct mslm_NetShareInfo_1_result *bufptr1;
89     DEFAULT char *nullptr;
90 };
91 struct mslm_NetShareEnum_result {
92     DWORD level;
93     SWITCH(level)
94     union mslm_NetShareEnum_ru ru;
95 };

98 OPERATION(SRVSVC_OPNUM_NetShareEnum)
99 struct mslm_NetShareEnum {
100     IN LPTSTR servername;
101     INOUT DWORD level;
102     INOUT struct mslm_NetShareEnum_result result;
103     IN DWORD pefmaxlen;
104     OUT DWORD totalentries;
105     INOUT DWORD *resume_handle;
106     OUT DWORD status;
107 };

110 /*
111 * SRVSVC NetServerGetInfo (
112 *   IN LPTSTR   servername,
113 *   IN DWORD    level,
114 *   OUT union switch(level) {
115 *     case 100: _SERVER_INFO_100 * p100;
116 *     case 101: _SERVER_INFO_101 * p101;
117 *     case 102: _SERVER_INFO_102 * p102;
118 *   } bufptr,
119 *   OUT DWORD   status
120 *   )
121 */

123 /* for svX_platform (note: decimal!) */
124 #define SV_PLATFORM_ID_DOS 300
125 #define SV_PLATFORM_ID_OS2 400
126 #define SV_PLATFORM_ID_NT 500

```

```
127 #define SV_PLATFORM_ID_OSF      600
128 #define SV_PLATFORM_ID_VMS      700

130 struct mslm_SERVER_INFO_100 {
131     DWORD      sv100_platform_id;
132     LPTSTR     sv100_name;
133 };

135 struct mslm_SERVER_INFO_101 {
136     DWORD      sv101_platform_id;
137     LPTSTR     sv101_name;
138     DWORD      sv101_version_major;
139     DWORD      sv101_version_minor;
140     DWORD      sv101_type;
141     LPTSTR     sv101_comment;
142 };

144 union mslm_NetServerGetInfo_ru {
145     CASE(100)      struct mslm_SERVER_INFO_100 *info100;
146     CASE(101)      struct mslm_SERVER_INFO_101 *info101;
147     DEFAULT        char *nullptr;
148 };

150 struct mslm_NetServerGetInfo_result {
151     DWORD level;
152     SWITCH(level)
153     union mslm_NetServerGetInfo_ru ru;
154 };

157 OPERATION(SRVSVCL_OPNUM_NetServerGetInfo)
158 struct mslm_NetServerGetInfo {
159     IN LPTSTR     servername;
160     IN DWORD      level;
161     OUT struct mslm_NetServerGetInfo_result result;
162     OUT DWORD      status;
163 };

166 /*
167 * The SRVSVCL interface
168 */
169 INTERFACE(0)
170 union srvsvcl_interface {
171     CASE(SRVSVCL_OPNUM_NetShareEnum)
172     struct mslm_NetShareEnum      NetShareEnum;
173     CASE(SRVSVCL_OPNUM_NetServerGetInfo)
174     struct mslm_NetServerGetInfo  NetServerGetInfo;
175 };
176 typedef union srvsvcl_interface  srvsvcl_interface_t;
177 EXTERNTYPEINFO(srvsvcl_interface)
```

new/usr/src/cmd/fs.d/smbclnt/smbutil/srvsvcl_clnt.c

1

```
*****
3558 Sun Mar 18 01:13:14 2018
new/usr/src/cmd/fs.d/smbclnt/smbutil/srvsvcl_clnt.c
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...
*****
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19 * CDDL HEADER END
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21
22 /*
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25 *
26 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
27 */
28
29 /*
30 * A few excerpts from lib/smbdrv/libmlsvc
31 * See longer comment in srvsvcl.ndl
32 */
33
34 #include <sys/errno.h>
35 #include <stdio.h>
36 #include <time.h>
37 #include <strings.h>
38 #include <time.h>
39
40 #include <libmlrpc/libmlrpc.h>
41 #include "srvsvcl_clnt.h"
42
43 static ndr_service_t srvsvc_service = {
44     "SRVSVC",                /* name */
45     "Server services",      /* desc */
46     "\\srvsvc",             /* endpoint */
47     "\\PIPE\ntsvcs",        /* sec_addr_port */
48     "4b324fc8-1670-01d3-1278-5a47bf6ee188", 3, /* abstract */
49     NDR_TRANSFER_SYNTAX_UUID, 2, /* transfer */
50     0,                       /* no bind_instance_size */
51     0,                       /* no bind_req() */
52     0,                       /* no unbind_and_close() */
53     0,                       /* use generic_call_stub() */
54     &TYPEINFO(srvsvc_interface), /* interface_ti */
55     NULL,                    /* stub_table */
56 };
57
58 /*
59 * srvsvc_initialize
60 */
```

new/usr/src/cmd/fs.d/smbclnt/smbutil/srvsvcl_clnt.c

2

```
61 * This function registers the SRVSVC RPC interface with the RPC runtime
62 * library. It must be called in order to use either the client side
63 * or the server side functions.
64 */
65 void
66 srvsvcl_initialize(void)
67 {
68     static int init_done;
69     if (init_done)
70         return;
71     init_done = 1;
72     (void) ndr_svc_register(&srvsvc_service);
73 }
74
75 /*
76 * Client-side stub for NetServerGetInfo
77 */
78 int
79 srvsvc_net_server_getinfo(mlrpc_handle_t *handle, char *server,
80     int level, union mslm_NetServerGetInfo_ru *resp)
81 {
82     struct mslm_NetServerGetInfo arg;
83     int len, opnum, rc;
84
85     opnum = SRVSVC_OPNUM_NetServerGetInfo;
86     bzero(&arg, sizeof (arg));
87
88     len = strlen(server) + 4;
89     arg.servername = ndr_rpc_malloc(handle, len);
90     if (arg.servername == NULL)
91         return (ENOMEM);
92
93     (void) snprintf((char *)arg.servername, len, "\\\\"%s", server);
94     arg.level = level;
95
96     rc = ndr_rpc_call(handle, opnum, &arg);
97     if ((rc != 0) || (arg.status != 0))
98         return (EIO);
99
100     *resp = arg.result.ru;
101     return (0);
102 }
103
104 /*
105 * Client-side stub for NetShareEnum
106 */
107 int
108 srvsvc_net_share_enum(mlrpc_handle_t *handle, char *server,
109     int level, union mslm_NetShareEnum_ru *resp)
110 {
111     /* Any enum result type is OK for nres. */
112     struct mslm_NetShareInfo_0_result nres;
113     struct mslm_NetShareEnum arg;
114     int len, opnum, rc;
115
116     opnum = SRVSVC_OPNUM_NetShareEnum;
117     bzero(&nres, sizeof (nres));
118     bzero(&arg, sizeof (arg));
119
120     len = strlen(server) + 4;
121     arg.servername = ndr_rpc_malloc(handle, len);
122     if (arg.servername == NULL)
123         return (ENOMEM);
124
125     (void) snprintf((char *)arg.servername, len, "\\\\"%s", server);
126     arg.level = level;
```

```
127     arg.result.level = level;
128     arg.result.ru.bufptr0 = &nres;
129     arg.prefmaxlen = 0xFFFFFFFF;
130     arg.resume_handle = NULL;

132     rc = ndr_rpc_call(handle, opnum, &arg);
133     if ((rc != 0) || (arg.status != 0))
134         return (EIO);

136     *resp = arg.result.ru;
137     return (0);
138 }
```

new/usr/src/cmd/fs.d/smbclnt/smbutil/srvsvcl_clnt.h

1

1471 Sun Mar 18 01:13:15 2018

new/usr/src/cmd/fs.d/smbclnt/smbutil/srvsvcl_clnt.h
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...

```
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9  * or http://www.opensolaris.org/os/licensing.
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17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23 * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
24 * Use is subject to license terms.
25 *
26 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
27 */

29 #ifndef _SRVSVC1_CLNT_H
30 #define _SRVSVC1_CLNT_H

32 /*
33 * Excerpts from lib/smbdrv/libmlsvc
34 * Just enough for share enumeration.
35 */

37 #include <libmlrpc/libmlrpc.h>
38 #include "srvsvcl.ndl"

40 void srvsvcl_initialize(void);
41 int srvsvcl_net_share_enum(mlrpc_handle_t *handle, char *server,
42     int level, union mslm_NetShareEnum_ru *resp);
43 int srvsvcl_net_server_getinfo(mlrpc_handle_t *handle, char *server,
44     int level, union mslm_NetServerGetInfo_ru *resp);

46 #endif /* _SRVSVC1_CLNT_H */
```

```

*****
4987 Sun Mar 18 01:13:15 2018
new/usr/src/cmd/fs.d/smbclnt/smbutil/view.c
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...
*****
1 /*
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4  *
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6  * modification, are permitted provided that the following conditions
7  * are met:
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9  * notice, this list of conditions and the following disclaimer.
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26 * OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)
27 * HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
28 * LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY
29 * OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF
30 * SUCH DAMAGE.
31 *
32 * $Id: view.c,v 1.9 2004/12/13 00:25:39 lindak Exp $
33 */

35 /*
36  * Copyright (c) 2008, 2010, Oracle and/or its affiliates. All rights reserved.
37  * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
38 */

40 #include <sys/types.h>
41 #include <errno.h>
42 #include <stdio.h>
43 #include <err.h>
44 #include <unistd.h>
45 #include <strings.h>
46 #include <stdlib.h>
47 #include <sysexits.h>
48 #include <libintl.h>

50 #include <netsmb/smb.h>
51 #include <netsmb/smb_lib.h>
51 #include <netsmb/smb_netshareenum.h>

52 #include "common.h"

54 static int use_rap;
55 int enum_shares(smb_ctx_t *);
56 void print_shares(int, int, struct share_info *);

56 void

```

```

57 view_usage(void)
58 {
59     printf(gettext("usage: smbutil view [connection options] //"
60                 "[workgroup;][user[:password@]server\n"));
61     exit(1);
62 }

64 int
65 cmd_view(int argc, char *argv[])
66 {
67     struct smb_ctx *ctx;
68     int error, err2, opt;

70     if (argc < 2)
71         view_usage();

73     error = smb_ctx_alloc(&ctx);
74     if (error)
75         return (error);

77     error = smb_ctx_scan_argv(ctx, argc, argv,
78                             SMBL_SERVER, SMBL_SERVER, USE_WILDCARD);
79     if (error)
80         goto out;
82     return (error);

84     error = smb_ctx_readrc(ctx);
85     if (error)
86         goto out;
87     return (error);

88     while ((opt = getopt(argc, argv, STDPARAM_OPT)) != EOF) {
89         if (opt == '?')
90             view_usage();
91         /*
92          * This is an undocumented option, just for testing.
93          * Use the old LanMan Remote API Protocol (RAP) for
94          * enumerating shares.
95          */
96         if (opt == 'B') {
97             use_rap++;
98             continue;
99         }
100        error = smb_ctx_opt(ctx, opt, optarg);
101        if (error)
102            goto out;
103        return (error);
104    }

105    smb_ctx_setshare(ctx, "IPC$", USE_IPC);

106    /*
107     * Resolve the server address,
108     * setup derived defaults.
109     */
110    error = smb_ctx_resolve(ctx);
111    if (error)
112        goto out;
113    return (error);

114    /*
115     * Have server, share, etc. from above:
116     * smb_ctx_scan_argv, option settings.
117     * Get the session and tree.
118     */
118    again:

```



```

119     error = smb_ctx_get_ssn(ctx);
120     if (error == EAUTH) {
121         err2 = smb_get_authentication(ctx);
122         if (err2 == 0)
123             goto again;
124     }
125     if (error) {
126         smb_error(gettext("/%s: login failed"),
127                 error, ctx->ct_fullserver);
128         goto out;
129     }
130
131     error = smb_ctx_get_tree(ctx);
132     if (error) {
133         smb_error(gettext("/%s/%s: tree connect failed"),
134                 error, ctx->ct_fullserver, ctx->ct_origshare);
135         goto out;
136     }
137
138     /*
139     * Have IPC$ tcon, now list shares.
140     * Try RPC; if that fails, do RAP.
141     * This prints its own errors.
142     */
143     if (!use_rap)
144         error = share_enum_rpc(ctx, ctx->ct_fullserver);
145     if (error || use_rap)
146         error = share_enum_rap(ctx);
147     error = enum_shares(ctx);
148     if (error)
149         return (error);
150
151 out:
152     smb_ctx_free(ctx);
153     return (0);
154 }
155
156 _____unchanged_portion_omitted_____
157 #endif
158
159 /*
160 * Print one line of the share list, or
161 * if SHARE is null, print the header line.
162 */
163 int
164 enum_shares(smb_ctx_t *ctx)
165 {
166     struct share_info *share_info;
167     int error, entries, total;
168
169     /*
170     * XXX: Later, try RPC first,
171     * then fall back to RAP...
172     */
173     error = smb_netshareenum(ctx, &entries, &total, &share_info);
174     if (error) {
175         smb_error(gettext("/%s failed to list shares"),
176                 error, ctx->ct_fullserver);
177         return (error);
178     }
179     print_shares(entries, total, share_info);
180     return (0);
181 }
182
183 void
184 view_print_share(char *share, int type, char *comment)

```

```

182 print_shares(int entries, int total,
183             struct share_info *share_info)
184 {
185     char *stname;
186     int stindex;
187     struct share_info *ep;
188     int i;
189
190     if (share == NULL) {
191         printf(gettext("Share      Type      Comment\n"));
192         printf("-----\n");
193         return;
194     }
195     for (ep = share_info, i = 0; i < entries; i++, ep++) {
196         int sti = ep->type & STYPE_MASK;
197         if (sti > STYPE_UNKNOWN)
198             sti = STYPE_UNKNOWN;
199         printf("%-12s %-10s %s\n", ep->netname,
200             gettext(shtype[sti]),
201             ep->remark ? ep->remark : "");
202         free(ep->netname);
203         free(ep->remark);
204     }
205     printf(gettext("\n%d shares listed from %d available\n"),
206           entries, total);
207
208     stindex = type & STYPE_MASK;
209     if (stindex > STYPE_UNKNOWN)
210         stindex = STYPE_UNKNOWN;
211     stname = gettext(shtype[stindex]);
212
213     if (comment == NULL)
214         comment = "";
215
216     printf("%-12s %-10s %s\n", share, stname, comment);
217     free(share_info);
218 }
219
220 _____unchanged_portion_omitted_____

```

```
*****
8210 Sun Mar 18 01:13:15 2018
new/usr/src/common/smbsrv/smb_door_legacy.c
1575 untangle libmlrpc ... (smbsrv)
*****
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18 *
19 * CDDL HEADER END
20 */
21 /*
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23 * Use is subject to license terms.
24 *
25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

28 /*
29 * Legacy encode/decode routines for door clients and servers.
30 */

32 #if !defined(_KERNEL) && !defined(_FAKE_KERNEL)
33 #include <errno.h>
34 #include <string.h>
35 #include <strings.h>
36 #else
37 #include <sys/types.h>
38 #include <sys/sunddi.h>
39 #include <sys/errno.h>
40 #endif

42 #include <smb/wintypes.h>
42 #include <smbsrv/wintypes.h>
43 #include <smbsrv/smb_share.h>
44 #include <smbsrv/smb_door.h>
45 #include <smbsrv/alloc.h>
46 #include <smbsrv/smbinfo.h>

48 smb_dr_ctx_t *
49 smb_dr_decode_start(char *ptr, int size)
50 {
51     smb_dr_ctx_t *ctx = MEM_MALLOC("CommonDoor", sizeof (smb_dr_ctx_t));
52     if (ctx) {
53         ctx->start_ptr = ctx->ptr = ptr;
54         ctx->end_ptr = ptr + size;
55         ctx->status = 0;
56     }
57     return (ctx);
58 }
    
```

unchanged portion omitted

new/usr/src/common/smbsrv/smb_token_xdr.c

1

```
*****
7058 Sun Mar 18 01:13:15 2018
new/usr/src/common/smbsrv/smb_token_xdr.c
1575 untangle libmlrpc ... (smbsrv)
*****
1 /*
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17 * information: Portions Copyright [yyyy] [name of copyright owner]
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19 * CDDL HEADER END
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21 /*
22 * Copyright 2010 Sun Microsystems, Inc. All rights reserved.
23 * Use is subject to license terms.
24 *
25 * Copyright 2015 Nexenta Systems, Inc. All rights reserved.
26 */

28 /*
29 * This file was originally generated using rpcgen.
30 */

32 #if !defined(_KERNEL) && !defined(_FAKE_KERNEL)
33 #include <stdlib.h>
34 #endif /* !_KERNEL */
35 #include <smb/wintypes.h>
36 #include <smbsrv/wintypes.h>
37 #include <smbsrv/smb_sid.h>
38 #include <smbsrv/smb_xdr.h>
39 #include <smbsrv/smb_token.h>

40 static bool_t smb_privset_xdr(XDR *, smb_privset_t *);
41 static bool_t smb_sid_xdr(XDR *, smb_sid_t *);

43 static bool_t
44 smb_privset_helper_xdr(XDR *xdrs, char **privs)
45 {
46     uint32_t pos, len;
47     uint32_t cnt;
48     bool_t rc;
49     smb_privset_t *p;

51     if (xdrs->x_op == XDR_DECODE) {
52         pos = xdr_getpos(xdrs);

54         if (!xdr_bool(xdrs, &rc))
55             return (FALSE);

57         if (!xdr_uint32_t(xdrs, &cnt))
58             return (FALSE);

60         rc = xdr_setpos(xdrs, pos);
```

new/usr/src/common/smbsrv/smb_token_xdr.c

2

```
62         if (rc == FALSE)
63             return (FALSE);
64     } else {
65         if (*privs == NULL)
66             return (FALSE);

68         p = (smb_privset_t *) (uintptr_t) *privs;
69         cnt = p->priv_cnt;
70     }

72     len = sizeof (smb_privset_t)
73           - sizeof (smb_luid_attrs_t)
74           + (cnt * sizeof (smb_luid_attrs_t));

76     if (!xdr_pointer(xdrs, privs, len, (xdrproc_t) smb_privset_xdr))
77         return (FALSE);

79     return (TRUE);
80 }
_____unchanged_portion_omitted_____
```

```

*****
14513 Sun Mar 18 01:13:15 2018
new/usr/src/lib/Makefile
1575 untangle libmlrpc ... (libmlrpc)
*****
1 #
2 # CDDL HEADER START
3 #
4 # The contents of this file are subject to the terms of the
5 # Common Development and Distribution License (the "License").
6 # You may not use this file except in compliance with the License.
7 #
8 # You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9 # or http://www.opensolaris.org/os/licensing.
10 # See the License for the specific language governing permissions
11 # and limitations under the License.
12 #
13 # When distributing Covered Code, include this CDDL HEADER in each
14 # file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 # If applicable, add the following below this CDDL HEADER, with the
16 # fields enclosed by brackets "[]" replaced with your own identifying
17 # information: Portions Copyright [yyyy] [name of copyright owner]
18 #
19 # CDDL HEADER END
20 #
21 #
22 #
23 # Copyright (c) 1989, 2010, Oracle and/or its affiliates. All rights reserved.
24 # Copyright (c) 2012 by Delphix. All rights reserved.
25 # Copyright (c) 2012, Joyent, Inc. All rights reserved.
26 # Copyright (c) 2013 Gary Mills
27 # Copyright 2014 Garrett D'Amore <garrett@damore.org>
28 # Copyright (c) 2015 Gary Mills
29 # Copyright 2016 Toomas Soome <tsoome@me.com>
30 # Copyright 2018 Nexenta Systems, Inc.
31 # Copyright (c) 2016, Chris Fraire <cfraire@me.com>.
32 # Copyright 2017 RackTop Systems.
33 #
34 #
35 include ../Makefile.master
36 #
37 # Note that libcurses installs commands along with its library.
38 # This is a minor bug which probably should be fixed.
39 # Note also that a few extra libraries are kept in cmd source.
40 #
41 # Certain libraries are linked with, hence depend on, other libraries.
42 # Library dependencies are called out explicitly, see "Library
43 # interdependencies" below.
44 .PARALLEL:
45 #
46 # Build libc and its dependencies
47 SUBDIRS= \
48 crt \
49 ../cmd/sgs/libconv \
50 ../cmd/sgs/libdl \
51 libc \
52 .WAIT
53 #
54 # Build libraries with lots of dependents
55 SUBDIRS += \
56 libm \
57 libmd \
58 libmp \
59 libnsl \
60 libnvpair \
61 libsocket \

```

```

62 .WAIT
63 #
64 # Build everything else. Aside from explicit dependencies, all libraries
65 # are built in parallel.
66 SUBDIRS += \
67 ../cmd/sendmail/libmilter \
68 ../cmd/sgs/libelf \
69 ../cmd/sgs/librtld_db \
70 abi \
71 auditd_plugins \
72 brand \
73 c_synonyms \
74 cfgadm_plugins \
75 crypt_modules \
76 extendedFILE \
77 fm \
78 getloginx \
79 gss_mechs/mech_dh \
80 gss_mechs/mech_dummy \
81 gss_mechs/mech_krb5 \
82 gss_mechs/mech_spnego \
83 hal \
84 hbaapi \
85 krb5 \
86 libadm \
87 libads \
88 libadt_jni \
89 libadutils \
90 libaio \
91 libast \
92 libavl \
93 libbe \
94 libbrand \
95 libbsdmalloc \
96 libbsm \
97 libc_db \
98 libcfgadm \
99 libcmd \
100 libcmdutils \
101 libcommutil \
102 libcontract \
103 libcpc \
104 libcrypt \
105 libcryptoutil \
106 libctf \
107 libcurses \
108 libdevice \
109 libdevio \
110 libdevinfo \
111 libdhcagent \
112 libdhcputil \
113 libdisasm \
114 libdiskmgt \
115 libdladm \
116 libdll \
117 libdlpi \
118 libdns_sd \
119 libdoor \
120 libdscfg \
121 libdtrace \
122 libdtrace_jni \
123 libefi \
124 libelfsign \
125 libeti \
126 libexacct \
127 libexacct/demo \

```

new/usr/src/lib/Makefile

```

128 libfakekernel //
129 libfcoe //
130 libficl //
131 libfru //
132 libfruutils //
133 libfsmgt //
134 libfstyp //
135 libgen //
136 libgrubmgmt //
137 libgss //
138 libhotplug //
139 libidmap //
140 libilb //
141 libima //
142 libinetsvc //
143 libinetutil //
144 libinstzones //
145 libintl //
146 libipadm //
147 libipd //
148 libipmi //
149 libipmp //
150 libipp //
151 libipseutil //
152 libiscsit //
153 libkmf //
154 libkrb5 //
155 libkstat //
156 libkvm //
157 libldap5 //
158 liblgrp //
159 liblm //
160 libml //
161 libmail //
162 libmalloc //
163 libmapid //
164 libmapmalloc //
165 libmd5 //
166 libmlrpc //
167 libmtmalloc //
168 libmvec //
169 libndmp //
170 libnisdb //
171 libnls //
172 libnsctl //
173 libnwam //
174 libofmt //
175 libpam //
176 libpcidb //
177 libpctx //
178 libpicl //
179 libpicltree //
180 libpkg //
181 libpool //
182 libpp //
183 libproc //
184 libproject //
185 libpthread //
186 libraidcfg //
187 librcm //
188 librdc //
189 libreparse //
190 libresolv //
191 libresolv2 //
192 librestart //
193 librpcsvc //

```

3

new/usr/src/lib/Makefile

```

194 librsm //
195 librstp //
196 librt //
197 libsas1 //
198 libscf //
199 libsched //
200 libsctp //
201 libsec //
202 libsecdb //
203 libsendfile //
204 libspf //
205 libshare //
206 libshell //
207 libsip //
208 libslldap //
209 libslp //
210 lib smbfs //
211 lib smbios //
212 lib smedia //
213 lib sqlite //
214 lib srpt //
215 lib stmf //
216 lib stmfproxy //
217 lib sum //
218 lib sun_ima //
219 lib sys //
220 lib sysevent //
221 lib tecla //
222 lib termcap //
223 lib thread //
224 lib tnf //
225 lib tnfctl //
226 lib tnfprobe //
227 lib tsnet //
228 lib tsol //
229 lib umem //
230 lib unistat //
231 lib uuid //
232 lib uutil //
233 lib volmgt //
234 lib vrrpadm //
235 lib vsan //
236 lib w //
237 lib wrap //
238 lib xcurses //
239 lib xcurses2 //
240 lib xnet //
241 lib zfs //
242 lib zfs_core //
243 lib zfs_jni //
244 lib zonecfg //
245 lib zoneinfo //
246 lib zonestat //
247 lib zpool //
248 madv //
249 mpapi //
250 mpss //
251 nametoaddr //
252 ncad_addr //
253 nsswitch //
254 pam_modules //
255 passwdutil //
256 pkcs11 //
257 policykit //
258 print //
259 pylibbe //

```

4

new/usr/src/lib/Makefile

```

260     pysolaris      \
261     pyzfs          \
262     raidcfg_plugins \
263     rpcsec_gss     \
264     sasl_plugins   \
265     scsi           \
266     smbshr        \
267     smhba         \
268     sun_fc        \
269     sun_sas       \
270     udapl         \
271     watchmalloc   \
272     ${$(MACH)_SUBDIRS}

274 i386_SUBDIRS= \
275     libfdisk    \
276     libsaveargs

278 sparc_SUBDIRS= \
279     efcodes    \
280     libds      \
281     libdscp    \
282     libprtdiag \
283     libprtdiag_psr \
284     libpri     \
285     librsc     \
286     storage    \
287     libpcp     \
288     libtsalarm \
289     libv12n

291 #
292 # Create a special version of $(SUBDIRS) with no .WAIT's, for use with the
293 # clean and clobber targets (for more information, see those targets, below).
294 #
295 NOWAIT_SUBDIRS= $(SUBDIRS:.WAIT=)

297 DCSSUBDIRS=

299 MSGSUBDIRS= \
300     abi          \
301     auditd_plugins \
302     brand        \
303     cfgadm_plugins \
304     gss_mechs/mech_dh \
305     gss_mechs/mech_krb5 \
306     krb5         \
307     libast       \
308     libbsm      \
309     libc         \
310     libcfgadm   \
311     libcmd      \
312     libcontract \
313     libcurses   \
314     libdhcputil \
315     libdiskmgt  \
316     libdladm    \
317     libdll      \
318     libgrubmgmt \
319     libgss      \
320     libidmap    \
321     libilb     \
322     libinstzones \
323     libipadm    \
324     libipmp     \
325     libipsecutil \

```

5

new/usr/src/lib/Makefile

```

326     libldap5     \
327     libnsl       \
328     libnwm       \
329     libofmt      \
330     libpam       \
331     libpicl      \
332     libpkg       \
333     libpool      \
334     libpp        \
335     libreparse   \
336     libsasl      \
337     libscf       \
338     libsecdb     \
339     libshare     \
340     libshell     \
341     libslldap    \
342     libslp       \
343     libsmbf      \
344     libsmmedia   \
345     libsum       \
346     libtsol     \
347     libutil      \
348     libvrrpadm  \
349     libvscan    \
350     libzfs       \
351     libzonecfg   \
352     madv         \
353     mpss         \
354     pam_modules  \
355     pyzfs        \
356     rpcsec_gss   \
357     ${$(MACH)_MSGSUBDIRS}

359 sparc_MSGSUBDIRS= \
360     libprtdiag    \
361     libprtdiag_psr

363 i386_MSGSUBDIRS= libfdisk

365 HDRSUBDIRS= \
366     ../cmd/sendmail/libmilter \
367     auditd_plugins \
368     fm \
369     hal \
370     hbaapi \
371     libads \
372     libast \
373     libbrand \
374     libbsm \
375     libc \
376     libcmd \
377     libcmdutils \
378     libcommputil \
379     libcontract \
380     libcpc \
381     libcryptoutil \
382     libctf \
383     libcurses \
384     libdevice \
385     libdevind \
386     libdevinfo \
387     libdhcputil \
388     libdhcputil \
389     libdisasm \
390     libdiskmgt \
391     libdladm \

```

6

new/usr/src/lib/Makefile

```

392 libdll //
393 libdlpi //
394 libdns_sd //
395 libdscfg //
396 libdtrace //
397 libdtrace_jni //
398 libelfsign //
399 libeti //
400 libfakekernel //
401 libfcoe //
402 libfru //
403 libfstyp //
404 libgen //
405 libgrubmgmt //
406 libidmap //
407 libilb //
408 libima //
409 libinetsvc //
410 libinetutil //
411 libinstzones //
412 libipadm //
413 libipd //
414 libipmi //
415 libipmp //
416 libipp //
417 libipsecutil //
418 libiscsit //
419 libkrb5 //
420 libkstat //
421 libkvm //
422 libmail //
423 libmapid //
424 libmd //
425 libmlrpc //
426 libmtmalloc //
427 libndmp //
428 libnsctl //
429 libnsl //
430 libnvpair //
431 libnwam //
432 libofmt //
433 libpam //
434 libpcidb //
435 libpctx //
436 libpicl //
437 libpicltree //
438 libpool //
439 libpp //
440 libproc //
441 libraidcfg //
442 librcm //
443 librdc //
444 libreparse //
445 librestart //
446 librpcsvc //
447 librsn //
448 librstp //
449 libsas1 //
450 libscf //
451 libsec //
452 libdff //
453 libshare //
454 libshell //
455 libsip //
456 libslp //
457 libsmvfs //

```

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new/usr/src/lib/Makefile

```

458 libsmbios //
459 libsmmedia //
460 libsocket //
461 libsqlite //
462 libsrpt //
463 libstmf //
464 libstmfproxy //
465 libsum //
466 libsun_ima //
467 libsysevent //
468 libtecla //
469 libtermcap //
470 libtnf //
471 libtnfctl //
472 libtnfprobe //
473 libtsnet //
474 libtsol //
475 libumem //
476 libunistat //
477 libuutil //
478 libvolmgt //
479 libvrrpadm //
480 libvscan //
481 libwrap //
482 libxcurses2 //
483 libzfs //
484 libzfs_core //
485 libzfs_jni //
486 libzoneinfo //
487 libzonestat //
488 mpapi //
489 passwdutil //
490 pkcs11 //
491 policykit //
492 scsi //
493 smbdrv //
494 smhba //
495 udapl //
496 $(MACH)_HDRSUBDIRS)

498 i386_HDRSUBDIRS= //
499 libfdisk //
500 libsaveargs //

502 sparc_HDRSUBDIRS= //
503 libds //
504 libdscp //
505 libpri //
506 libv12n //
507 storage

509 all := TARGET= all
510 check := TARGET= check
511 clean := TARGET= clean
512 clobber := TARGET= clobber
513 install := TARGET= install
514 install_h := TARGET= install_h
515 lint := TARGET= lint
516 _dc := TARGET= _dc
517 _msg := TARGET= _msg

519 .KEEP_STATE:

521 #
522 # For the all and install targets, we clearly must respect library
523 # dependencies so that the libraries link correctly. However, for

```

8

```

524 # the remaining targets (check, clean, clobber, install_h, lint, _dc
525 # and _msg), libraries do not have any dependencies on one another
526 # and thus respecting dependencies just slows down the build.
527 # As such, for these rules, we use pattern replacement to explicitly
528 # avoid triggering the dependency information. Note that for clean,
529 # clobber and lint, we must use $(NOWAIT_SUBDIRS) rather than
530 # $(SUBDIRS), to prevent '.WAIT' from expanding to '.WAIT-noddepend'.
531 #
532
533 all:                $(SUBDIRS)
534
535 install:            $(SUBDIRS) .WAIT install_extra
536
537 # extra libraries kept in other source areas
538 install_extra:
539     @cd ../cmd/sgs; pwd; $(MAKE) install_lib
540     @pwd
541
542 clean clobber lint: $(NOWAIT_SUBDIRS:%=%-nodepend)
543
544 install_h check:   $(HDRSUBDIRS:%=%-nodepend)
545
546 _msg:               $(MSGSUBDIRS:%=%-nodepend) .WAIT _dc
547
548 _dc:                $(DCSUBDIRS:%=%-nodepend)
549
550 # Library interdependencies are called out explicitly here.
551 ../cmd/sgs/libconv: crt
552 ../cmd/sgs/libdl: crt
553 libc:               ../cmd/sgs/libconv ../cmd/sgs/libdl
554
555 libm:               libc
556 libmd:              libc
557 libmp:              libc
558 libnsl:             libc libmd libmp
559 libnvpair:          libc libnsl
560 libsocket:          libc libnsl
561
562 basedeps:           libc libm libmd libmp libnsl libnvpair libsocket
563 basedeps :=         TARGET=install
564
565 # The following dependencies are currently required by libdbus-1 and should
566 # be used for anything linking against it.
567 dbusdeps:           libsecdb libtsol libinetutil libscf libuutil libgen libsmbios
568
569 # The following dependencies don't need to be listed below as they are built
570 # before everything else:
571 # libc libm libmd libmp libnsl libnvpair libsocket
572 abi:                libctf libmapmalloc libproc
573 auditd_plugins:    libbsm libsecdb libgss libmtmalloc
574 brand:              libzonecfg libmapmalloc
575 cfgadm_plugins:    libdevice libdevinfo libhotplug librcm hbaapi libkstat libscf
576 fm:                 libxacct libipmi libzfs scsi libdevinfo libdevid libcfgadm \
577                    libcontract libsysevent ../cmd/sgs/libelf libldladm libsf
578 $(SPARC_BLD)fm:    libpri
579 gss_mechs/mech_dh:  libgss
580 gss_mechs/mech_dummy: libgss
581 gss_mechs/mech_krb5: libgss libresolv2 pkcs11 libkstat
582 gss_mechs/mech_spnego: gss_mechs/mech_krb5
583 hal:                dbusdeps
584 krb5:               gss_mechs/mech_krb5 libtecla libldap5
585 libadt_jni:         libbsm
586 libadutils:         libldap5 libresolv2
587 libbe:              libzfs libinstzones libuuid libgen libdevinfo libefi libfi
588 libbsm:             libinetutil libscf libsecdb libtsol
589 libcfgadm:          libdevinfo

```

```

590 libcmd:             libsm libast
591 libcmdutils:       libavl
592 libpcp:             libpctx
593 libcrypt:           libgen
594 libdevid:           libdevinfo
595 libdevinfo:         libsec libgen
596 libdhcpcagent:     libdhcputil libuuid libdlpi libcontract
597 libdhcputil:       libgen libinetutil libdlpi
598 libdiskmgmt:       libdevid libdevinfo libadm libefi libkstat libsysevent
599 $(INTEL_BLD)libdiskmgmt: libfdisk
600 libldladm:          libdevinfo libinetutil libscf librcm libxacct libkstat \
601                    libpool
602 libdll:             libast
603 libdlpi:            libinetutil libldladm
604 libds:              libsysevent
605 libdscfg:           libnsctl libunistat libadm
606 libdtrace:         libproc libgen libctf libmapmalloc
607 libdtrace_jni:     libuutil libdtrace
608 libefi:             libuuid
609 libelfsign:        libcryptoutil libkmf ../cmd/sgs/libelf
610 libeti:             libcurses
611 libexacct/demo:    libxacct libproject
612 libfakekernel:     libumem libcryptoutil
613 libfcoe:            libldladm
614 libfiel:           libuuid libumem
615 libfru:             libfruutils
616 libfsmgmt:         libkstat
617 libgrubmgmt:       libdevinfo libzfs libfstyp libefi
618 $(INTEL_BLD)libgrubmgmt: libfdisk
619 libidmap:           libavl libuutil
620 libinetsvc:         libscf
621 libinstzones:      libzonecfg libcontract
622 libipadm:           libinetutil libdlpi libdhcpcagent libldladm libsecdb libdhcputil
623 libipmp:            libinetutil
624 libipsecutil:      libtecla libtsol
625 libiscsit:         libstmf libuuid
626 libkfm:             libcryptoutil pkcs11
627 libkvm:             ../cmd/sgs/libelf
628 libldap5:          libsas1
629 libmapid:           libresolv2 libscf
630 libmlrpc:          libsm bfs libuuid
631 libndmp:            libscf
632 libnisdb:           libldap5
633 libnwam:            libscf libbsm libldladm libipadm
634 libpcp:             libumem libdevinfo
635 libpctx:            libproc
636 libpkg:             libscf libadm
637 libpool:            libscf libxacct
638 libpp:              libast
639 libproc:            ../cmd/sgs/librtld_db ../cmd/sgs/libelf libctf
640 $(INTEL_BLD)libproc: libsaveargs
641 libproject:         libpool libproc libsecdb
642 libprtdiag:        libkstat
643 libprtdiag_psr:    libprtdiag
644 libraidcfg:         libdevinfo
645 librdc:             libnsctl libunistat libdscfg
646 librestart:         libuutil libscf libpool libproject libsecdb libsysevent
647 libsas1:            libgss pkcs11
648 libsaveargs:       libdisasm
649 libscf:             libuutil libgen libsmbios
650 libsec:             libavl libidmap
651 libsf:              libnvpair
652 libshare:           libscf libzfs libuuid libfsmgmt libsecdb libumem libsm bfs
653 libshell:           libast libcmd libdll libsecdb
654 libsip:             libmd5
655 libsldap:           libldap5 libscf

```


new/usr/src/lib/Makefile

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```

656 libsmbfs: libkrb5 libsec libidmap pkcs11
657 libsmbios: libdevinfo
658 libsrpt: libstmf
659 libstmf: libscf
660 libstmfproxy: libstmf libpthread
661 libsum: libast
662 libsun_ima: libdevinfo libsyssevent
663 libsyssevent: libsecdb
664 libtecla: libcurses
665 libtermcap: libcurses
666 libtnfctl: ../cmd/sgs/libelf
667 libtsalarm: libpcp
668 libtsnet: libtsol libsecdb
669 libtsol: libsecdb
670 libuuid: libdlpi
671 libv12n: libds libuuid
672 libvolmgt: libadm
673 libvrrpadm: libdladm libscf
674 libvscan: libscf libsecdb
675 libzfs: libdevid libgen libuutil libadm libavl libefi libidmap \
676 libumem libtsol libzfs_core libcmdutils
677 libzfs_jni: libdiskmgt libzfs
678 libzonecfg: libuuid libsyssevent libsec libbrand libpool libscf libproc \
679 libuutil libbsm libsecdb
680 libzonestat: libcmdutils libumem
681 libzpool: libavl libumem libcmdutils libsyssevent libfakekernel
682 madv: libgen
683 mpapi: libpthread libdevinfo libsyssevent
684 mpss: libgen
685 nsswitch: libadutils libidmap libdns_sd libscf libldap5 libslldap
686 pam_modules: libproject passwdutil smbssrv libtsnet libpam libbsm libsecdb
687 passwdutil: libslldap
688 pkcs11: libcryptoutil libgen libuuid
689 policykit: dbusdeps
690 print: libldap5 libmd5 libsendfile
691 pylibbe: libbe libzfs
692 pysolaris: libsec libidmap
693 pyzfs: libzfs
694 raidcfg_plugins: libraidcfg librcm libcfgadm libpicl libpicltree
695 rpcsec_gss: libgss
696 sasl_plugins: pkcs11 libgss libsasl
697 scsi: libfru libumem libdevid libdevinfo
698 smbssrv: libxnet libpthread librt libshare libidmap pkcs11 libsqlite \
699 libcryptoutil librepase libcmdutils libresolv2 libsmbfs \
700 libuuid libfakekernel libads libgss libldap5 krb5 libmlrpc
701 storage: libuutil libfakekernel libads libgss libldap5 krb5
702 sun_fc: libdevice libdevinfo libdevid
703 sun_sas: libdevinfo libsyssevent libkstat libdevid
704 udapl: libdevinfo libdladm

```

```

706 #
707 # The reason this rule checks for the existence of the
708 # Makefile is that some of the directories do not exist
709 # in certain situations (e.g., exportable source builds,
710 # OpenSolaris).
711 #
712 $(SUBDIRS): FRC
713     @if [ -f $@/Makefile ]; then \
714         cd $@; pwd; $(MAKE) $(TARGET); \
715     else \
716         true; \
717     fi

```

```

719 $(SUBDIRS:%=-nodepend):
720     @if [ -f $@:%=-nodepend=~/Makefile ]; then \

```

new/usr/src/lib/Makefile

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```

721         cd $@:%=-nodepend=~/; pwd; $(MAKE) $(TARGET); \
722     else \
723         true; \
724     fi
726 FRC:

```

```
*****
1616 Sun Mar 18 01:13:15 2018
new/usr/src/lib/libmlrpc/Makefile
1575 untangle libmlrpc .. (libmlrpc)
*****
```

```
1 #
2 # CDDL HEADER START
3 #
4 # The contents of this file are subject to the terms of the
5 # Common Development and Distribution License (the "License").
6 # You may not use this file except in compliance with the License.
7 #
8 # You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9 # or http://www.opensolaris.org/os/licensing.
10 # See the License for the specific language governing permissions
11 # and limitations under the License.
12 #
13 # When distributing Covered Code, include this CDDL HEADER in each
14 # file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 # If applicable, add the following below this CDDL HEADER, with the
16 # fields enclosed by brackets "[]" replaced with your own identifying
17 # information: Portions Copyright [yyyy] [name of copyright owner]
18 #
19 # CDDL HEADER END
20 #
21 #
22 # Copyright 2007 Sun Microsystems, Inc. All rights reserved.
23 # Use is subject to license terms.
24 #
25 # Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 #

28 include $(SRC)/lib/Makefile.lib

30 HDRS=          libmlrpc.h ndr.h ndrtypes.ndl rpcpdu.ndl
31 HDRDIR=        common

33 ROOTHDRDIR=    $(ROOT)/usr/include/libmlrpc
34 ROOTHDRS=      $(HDRS:%=$(ROOTHDRDIR)/%)

36 # ISA targets
37 SUBDIRS = $(MACH)
38 $(BUILD64)SUBDIRS += $(MACH64)

40 all :=          TARGET = all
41 install :=      TARGET = install
42 clean :=        TARGET = clean
43 clobber :=      TARGET = clobber
44 lint :=         TARGET = lint

46 .KEEP_STATE:

48 all install clean clobber lint: $(SUBDIRS)

50 install_h: $(ROOTHDRDIR) $(ROOTHDRS)

52 check: $(CHECKHDRS)

54 $(ROOTHDRDIR)/%: %
55     $(INS.file)

57 $(ROOTHDRDIR):
58     $(INS.dir)

60 $(SUBDIRS): FRC
61     @cd $@; pwd; VERSION='$(VERSION)' $(MAKE) $(TARGET)
```

63 FRC:

65 include \$(SRC)/lib/Makefile.targ

```
*****
```

```
1727 Sun Mar 18 01:13:15 2018
```

```
new/usr/src/lib/libmlrpc/Makefile.com
```

```
1575 untangle libmlrpc .. (libmlrpc)
```

```
*****
```

```
1 #
2 # CDDL HEADER START
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21 #
22 #
23 # Copyright 2008 Sun Microsystems, Inc. All rights reserved.
24 # Use is subject to license terms.
25 #
26 # Copyright 2013 Nexenta Systems, Inc. All rights reserved.
27 #
28 #
29 LIBRARY =      libmlrpc.a
30 VERS =        .2
31 #
32 OBJS_COMMON =
33     mlrpc_clh.o      \
34     ndr_client.o    \
35     ndr_heap.o      \
36     ndr_marshall.o \
37     ndr_ops.o       \
38     ndr_process.o   \
39     ndr_server.o    \
40     ndr_svc.o       \
41     ndr_wchar.o
42 #
43 NDLLIST = rpepdu
44 #
45 OBJECTS=        $(OBJS_COMMON) $(NDLLIST:%=%_ndr.o)
46 CLEANFILES += $(NDLLIST:%=%_ndr.c)
47 #
48 include ../../Makefile.lib
49 #
50 LIBS=           $(DYNLIB) $(LINTLIB)
51 #
52 LDLIBS +=      -lsmbfs -luuid -lc
53 #
54 SRCDIR=        ../../common
55 SRCS=          $(OBJS_COMMON:%.o=$(SRCDIR)/%.c)
56 $(LINTLIB) := SRCS = $(SRCDIR)/$(LINTSRC)
57 #
58 NDLDIR =        $(SRCDIR)
59 #
60 CFLAGS +=      $(CCVERBOSE)
61 INCS = -I. -I$(SRCDIR)
```

```
62 CPPFLAGS += $(INCS) -D_REENTRANT
63 #
64 all:          $(LIBS)
65 #
66 lint:         lintcheck
67 #
68 include ../../Makefile.targ
69 #
70 objs/%_ndr.o pics/%_ndr.o : %_ndr.c
71 #
72 %_ndr.c : $(NDLDIR)/%.ndl
73           $(NDRGEN) -Y $(ANSI_CPP) $(CPPFLAGS) $<
74 #
75 .KEEP_STATE:
```

new/usr/src/lib/libmlrpc/amd64/Makefile

1

1063 Sun Mar 18 01:13:15 2018

new/usr/src/lib/libmlrpc/amd64/Makefile

1575 untangle libmlrpc .. (libmlrpc)

```
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18 #
19 # CDDL HEADER END
20 #
21 #
22 # Copyright 2007 Sun Microsystems, Inc. All rights reserved.
23 # Use is subject to license terms.
24 #
25 # ident "%Z%M% %I% %E% SMI"
26 #

26 MACH_LDLIBS += -L$(ROOT)/usr/lib/smbstrv/$(MACH64)

28 include ../Makefile.com
29 include .././Makefile.lib.64
31 include .././././Makefile.lib.64

33 DYNFLAGS += -R/usr/lib/smbstrv/$(MACH64)

31 install: all $(ROOTLIBS64) $(ROOTLINKS64) $(ROOTLINT64)
```

```

*****
19102 Sun Mar 18 01:13:15 2018
new/usr/src/lib/libmlrpc/common/libmlrpc.h
1575 untangle libmlrpc .. (libmlrpc)
*****
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18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright (c) 2007, 2010, Oracle and/or its affiliates. All rights reserved.
23 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
24 */

26 #ifndef _LIBMLRPC_H
27 #define _LIBMLRPC_H

29 #include <sys/types.h>
30 #include <sys/uio.h>
31 #include <smbsrv/wintypes.h>
32 #include <smbsrv/ndr.h>
33 #include <smbsrv/smb_sid.h>
34 #include <smbsrv/smb_xdr.h>

32 #include <smb/wintypes.h>
33 #include <libmlrpc/ndr.h>

35 #ifdef __cplusplus
36 extern "C" {
37 #endif

39 /*
40  * An MSRPC compatible implementation of OSF DCE RPC. DCE RPC is derived
41  * from the Apollo Network Computing Architecture (NCA) RPC implementation.
42  *
43  * CAE Specification (1997)
44  * DCE 1.1: Remote Procedure Call
45  * Document Number: C706
46  * The Open Group
47  * ogspecs@opengroup.org
48  *
49  * This implementation is based on the DCE Remote Procedure Call spec with
50  * enhancements to support Unicode strings. The diagram below shows the
51  * DCE RPC layers compared against ONC SUN RPC.
52  *
53  *      NDR RPC Layers          Sun RPC Layers          Remark
54  *      +-----+             +-----+             +-----+
55  *      | Application |         | Application |         The application
56  *      +-----+             +-----+
57  */

```

```

58  *      | Hand coded |         | RPCGEN gen'd |         | Where the real
59  *      | client/server |         | client/server |         | work happens
60  *      | srvsvc.ndl |         | *_svc.c *_clnt |         |
61  *      | srvsvc.c |         |                 |         |
62  *      +-----+             +-----+
63  *      | RPC Library |         | RPC Library |         | Calls/Return
64  *      | ndr_*.c |         |                 |         | Binding/PMAP
65  *      +-----+             +-----+
66  *      | RPC Protocol |         | RPC Protocol |         | Headers, Auth,
67  *      | rpcdu.ndl |         |                 |         |
68  *      +-----+             +-----+
69  *      | IDL gen'd |         | RPCGEN gen'd |         | Aggregate
70  *      | NDR stubs |         | XDR stubs |         | Composition
71  *      | *_ndr.c |         | *_xdr.c |         |
72  *      +-----+             +-----+
73  *      | NDR Represen |         | XDR Represen |         | Byte order, padding
74  *      |                 |         |                 |         |
75  *      | Packet Heaps |         | Network Conn |         | DCERPC does not talk
76  *      | ndo_*.c |         | clnt_{tcp,udp} |         | directly to network.
77  *      +-----+             +-----+
78  *
79  * There are two major differences between the DCE RPC and ONC RPC:
80  *
81  * 1. NDR RPC only generates or processes packets from buffers. Other
82  *    layers must take care of packet transmission and reception.
83  *    The packet heaps are managed through a simple interface provided
84  *    by the Network Data Representation (NDR) module called ndr_stream_t.
85  *    ndo_*.c modules implement the different flavors (operations) of
86  *    packet heaps.
87  *
88  *    ONC RPC communicates directly with the network. You have to do
89  *    something special for the RPC packet to be placed in a buffer
90  *    rather than sent to the wire.
91  *
92  * 2. NDR RPC uses application provided heaps to support operations.
93  *    A heap is a single, monolithic chunk of memory that NDR RPC manages
94  *    as it allocates. When the operation and its result are done, the
95  *    heap is disposed of as a single item. The transaction, which
96  *    is the anchor of most operations, contains the necessary book-
97  *    keeping for the heap.
98  *
99  *    ONC RPC uses malloc() liberally throughout its run-time system.
100 *    To free results, ONC RPC supports an XDR_FREE operation that
101 *    traverses data structures freeing memory as it goes, whether
102 *    it was malloc'd or not.
103 */

105 /*
106  * Dispatch Return Code (DRC)
107  *
108  *      0x8000 15:01 Set to indicate a fault, clear indicates status
109  *      0x7F00 08:07 Status/Fault specific
110  *      0x00FF 00:08 PTYPE_... of PDU, 0xFF for header
111  */
112 #define NDR_DRC_OK 0x0000
113 #define NDR_DRC_MASK_FAULT 0x8000
114 #define NDR_DRC_MASK_SPECIFIER 0xFF00
115 #define NDR_DRC_MASK_PTYPE 0x00FF

117 /* Fake PTYPE DRC discriminators */
118 #define NDR_DRC_PTYPE_RPCHDR(DRC) (((DRC) & 0x00FF)
119 #define NDR_DRC_PTYPE_API(DRC) (((DRC) & 0x00AA)

121 /* DRC Recognizers */
122 #define NDR_DRC_IS_OK(DRC) (((DRC) & NDR_DRC_MASK_SPECIFIER) == 0)
123 #define NDR_DRC_IS_FAULT(DRC) (((DRC) & NDR_DRC_MASK_FAULT) != 0)

```

```

125 /*
126 * (Un)Marshalling category specifiers
127 */
128 #define NDR_DRC_FAULT_MODE_MISMATCH 0x8100
129 #define NDR_DRC_RECEIVED 0x0200
130 #define NDR_DRC_FAULT_RECEIVED_RUNT 0x8300
131 #define NDR_DRC_FAULT_RECEIVED_MALFORMED 0x8400
132 #define NDR_DRC_DECODED 0x0500
133 #define NDR_DRC_FAULT_DECODE_FAILED 0x8600
134 #define NDR_DRC_ENCODED 0x0700
135 #define NDR_DRC_FAULT_ENCODE_FAILED 0x8800
136 #define NDR_DRC_FAULT_ENCODE_TOO_BIG 0x8900
137 #define NDR_DRC_SENT 0x0A00
138 #define NDR_DRC_FAULT_SEND_FAILED 0x8B00

140 /*
141 * Resource category specifier
142 */
143 #define NDR_DRC_FAULT_RESOURCE_1 0x9100
144 #define NDR_DRC_FAULT_RESOURCE_2 0x9200

146 /*
147 * Parameters. Usually #define'd with useful alias
148 */
149 #define NDR_DRC_FAULT_PARAM_0_INVALID 0xC000
150 #define NDR_DRC_FAULT_PARAM_0_UNIMPLEMENTED 0xD000
151 #define NDR_DRC_FAULT_PARAM_1_INVALID 0xC100
152 #define NDR_DRC_FAULT_PARAM_1_UNIMPLEMENTED 0xD100
153 #define NDR_DRC_FAULT_PARAM_2_INVALID 0xC200
154 #define NDR_DRC_FAULT_PARAM_2_UNIMPLEMENTED 0xD200
155 #define NDR_DRC_FAULT_PARAM_3_INVALID 0xC300
156 #define NDR_DRC_FAULT_PARAM_3_UNIMPLEMENTED 0xD300

158 #define NDR_DRC_FAULT_OUT_OF_MEMORY 0xF000

160 /* RPCHDR */
161 #define NDR_DRC_FAULT_RPCHDR_MODE_MISMATCH 0x81FF
162 #define NDR_DRC_FAULT_RPCHDR_RECEIVED_RUNT 0x83FF
163 #define NDR_DRC_FAULT_RPCHDR_DECODE_FAILED 0x86FF
164 #define NDR_DRC_FAULT_RPCHDR_PTYPE_INVALID 0xC0FF /* PARAM_0_INVALID */
165 #define NDR_DRC_FAULT_RPCHDR_PTYPE_UNIMPLEMENTED 0xD0FF /* PARAM_0_UNIMP */

167 /* Request */
168 #define NDR_DRC_FAULT_REQUEST_PCONT_INVALID 0xC000 /* PARAM_0_INVALID */
169 #define NDR_DRC_FAULT_REQUEST_OPNUM_INVALID 0xC100 /* PARAM_1_INVALID */

171 /* Bind */
172 #define NDR_DRC_BINDING_MADE 0x000B /* OK */
173 #define NDR_DRC_FAULT_BIND_PCONT_BUSY 0xC00B /* PARAM_0_INVALID */
174 #define NDR_DRC_FAULT_BIND_UNKNOWN_SERVICE 0xC10B /* PARAM_1_INVALID */
175 #define NDR_DRC_FAULT_BIND_NO_SLOTS 0x910B /* RESOURCE_1 */

177 /* API */
178 #define NDR_DRC_FAULT_API_SERVICE_INVALID 0xC0AA /* PARAM_0_INVALID */
179 #define NDR_DRC_FAULT_API_BIND_NO_SLOTS 0x91AA /* RESOURCE_1 */
180 #define NDR_DRC_FAULT_API_OPNUM_INVALID 0xC1AA /* PARAM_1_INVALID */

182 struct ndr_xa;
183 struct ndr_client;

185 typedef struct ndr_stub_table {
186     int (*func)(void *, struct ndr_xa *);
187     unsigned short opnum;
188 } ndr_stub_table_t;
    unchanged_portion_omitted

```

```

235 #define NDR_BIND_SIDE_CLIENT 1
236 #define NDR_BIND_SIDE_SERVER 2

238 #define NDR_BINDING_TO_SPECIFIC(BINDING, TYPE) \
239     ((TYPE *) (BINDING)->instance_specific)

241 /*
242 * The binding list space must be provided by the application library
243 * for use by the underlying RPC library. We need at least two binding
244 * slots per connection.
245 */
246 #define NDR_N_BINDING_POOL 2

248 typedef struct ndr_pipe {
249     void *np_listener;
250     const char *np_endpoint;
251     struct smb_netuserinfo *np_user;
252     smb_netuserinfo_t *np_user;
253     int (*np_send)(struct ndr_pipe *, void *, size_t);
254     int (*np_recv)(struct ndr_pipe *, void *, size_t);
255     int np_fid;
256     uint16_t np_max_xmit_frag;
257     uint16_t np_max_recv_frag;
258     ndr_binding_t *np_binding;
259     ndr_binding_t np_binding_pool[NDR_N_BINDING_POOL];
260 } ndr_pipe_t;
    unchanged_portion_omitted

402 ndr_heap_t *ndr_heap_create(void);
403 void ndr_heap_destroy(ndr_heap_t *);
404 void *ndr_heap_dupmem(ndr_heap_t *, const void *, size_t);
405 void *ndr_heap_malloc(ndr_heap_t *, unsigned);
406 void *ndr_heap_strdup(ndr_heap_t *, const char *);
407 int ndr_heap_mstring(ndr_heap_t *, const char *, ndr_mstring_t *);
408 void ndr_heap_mkvecs(ndr_heap_t *, char *, ndr_vcstr_t *);
409 void ndr_heap_mkvcbs(ndr_heap_t *, uint8_t *, uint32_t, ndr_vcbuf_t *);
410 smb_sid_t *ndr_heap_siddup(ndr_heap_t *, smb_sid_t *);
411 int ndr_heap_used(ndr_heap_t *);
412 int ndr_heap_avail(ndr_heap_t *);

413 #define NDR_MALLOC(XA, SZ) ndr_heap_malloc((XA)->heap, SZ)
414 #define NDR_NEW(XA, T) ndr_heap_malloc((XA)->heap, sizeof(T))
415 #define NDR_NEWN(XA, T, N) ndr_heap_malloc((XA)->heap, sizeof(T)*(N))
416 #define NDR_STRDUP(XA, S) ndr_heap_strdup((XA)->heap, (S))
417 #define NDR_MSTRING(XA, S, OUT) ndr_heap_mstring((XA)->heap, (S), (OUT))
418 #define NDR_SIDDUP(XA, S) ndr_heap_dupmem((XA)->heap, (S), smb_sid_len(S))
419 #define NDR_SIDDUP(XA, S) ndr_heap_siddup((XA)->heap, (S))

420 typedef struct ndr_xa {
421     unsigned short ptype; /* high bits special */
422     unsigned short opnum;
423     ndr_stream_t recv_nds;
424     ndr_hdr_t recv_hdr;
425     ndr_stream_t send_nds;
426     ndr_hdr_t send_hdr;
427     ndr_binding_t *binding; /* what we're using */
428     ndr_binding_t *binding_list; /* from connection */
429     ndr_heap_t *heap;
430     ndr_pipe_t *pipe;
431 } ndr_xa_t;
    unchanged_portion_omitted

484 /* ndr_ops.c */
485 int nds_initialize(ndr_stream_t *, unsigned, int, ndr_heap_t *);
486 void nds_destruct(ndr_stream_t *);

```

```

487 void nds_show_state(ndr_stream_t *);

489 /* ndr_client.c */
490 int ndr_clnt_bind(ndr_client_t *, ndr_service_t *, ndr_binding_t **);
491 int ndr_clnt_bind(ndr_client_t *, const char *, ndr_binding_t **);
491 int ndr_clnt_call(ndr_binding_t *, int, void *);
492 void ndr_clnt_free_heap(ndr_client_t *);

494 /* ndr_marshall.c */
495 ndr_buf_t *ndr_buf_init(ndr_typeinfo_t *);
496 void ndr_buf_fini(ndr_buf_t *);
497 int ndr_buf_decode(ndr_buf_t *, unsigned, unsigned, const char *data, size_t,
498 void *);
499 int ndr_decode_call(ndr_xa_t *, void *);
500 int ndr_encode_return(ndr_xa_t *, void *);
501 int ndr_encode_call(ndr_xa_t *, void *);
502 int ndr_decode_return(ndr_xa_t *, void *);
503 int ndr_decode_pdu_hdr(ndr_xa_t *);
504 int ndr_encode_pdu_hdr(ndr_xa_t *);
505 void ndr_decode_frag_hdr(ndr_stream_t *, ndr_common_header_t *);
506 void ndr_remove_frag_hdr(ndr_stream_t *);
507 void ndr_show_hdr(ndr_common_header_t *);
508 unsigned ndr_bind_ack_hdr_size(ndr_xa_t *);
509 unsigned ndr_alter_context_rsp_hdr_size(void);

511 /* ndr_server.c */
512 void ndr_pipe_worker(ndr_pipe_t *);

514 int ndr_generic_call_stub(ndr_xa_t *);

517 boolean_t ndr_is_admin(ndr_xa_t *);
518 boolean_t ndr_is_poweruser(ndr_xa_t *);
519 int32_t ndr_native_os(ndr_xa_t *);

516 /* ndr_svc.c */
517 ndr_stub_table_t *ndr_svc_find_stub(ndr_service_t *, int);
518 ndr_service_t *ndr_svc_lookup_name(const char *);
519 ndr_service_t *ndr_svc_lookup_uuid(ndr_uuid_t *, int, ndr_uuid_t *, int);
520 int ndr_svc_register(ndr_service_t *);
521 void ndr_svc_unregister(ndr_service_t *);
522 void ndr_svc_binding_pool_init(ndr_binding_t **, ndr_binding_t pool[], int);
523 ndr_binding_t *ndr_svc_find_binding(ndr_xa_t *, ndr_p_context_id_t);
524 ndr_binding_t *ndr_svc_new_binding(ndr_xa_t *);

526 int ndr_uuid_parse(char *, ndr_uuid_t *);
527 void ndr_uuid_unparse(ndr_uuid_t *, char *);

529 ndr_hdid_t *ndr_hdalloc(const ndr_xa_t *, const void *);
530 void ndr_hdfree(const ndr_xa_t *, const ndr_hdid_t *);
531 ndr_handle_t *ndr_hdlookup(const ndr_xa_t *, const ndr_hdid_t *);
532 void ndr_hdclose(ndr_pipe_t *);

534 ssize_t ndr_uiomove(caddr_t, size_t, enum uio_rw, struct uio *);

536 /*
537  * An ndr_client_t is created while binding a client connection to hold
538  * the context for calls made using that connection.
539  *
540  * Handles are RPC call specific and we use an inheritance mechanism to
541  * ensure that each handle has a pointer to the client_t. When the top
542  * level (bind) handle is released, we close the connection.
543  *
544  * There are some places in libmlsvc where the code assumes that the
545  * handle member is first in this struct. careful
546  */
547 typedef struct mlrpc_handle {

```

```

548     ndr_hdid_t     handle;          /* keep first */
549     ndr_client_t   *clnt;
550 } mlrpc_handle_t;

552 int mlrpc_clh_create(mlrpc_handle_t *, void *);
553 uint32_t mlrpc_clh_bind(mlrpc_handle_t *, ndr_service_t *);
554 void mlrpc_clh_unbind(mlrpc_handle_t *);
555 void *mlrpc_clh_free(mlrpc_handle_t *);

557 int ndr_rpc_call(mlrpc_handle_t *, int, void *);
558 int ndr_rpc_get_ssnkey(mlrpc_handle_t *, unsigned char *, size_t);
559 void *ndr_rpc_malloc(mlrpc_handle_t *, size_t);
560 ndr_heap_t *ndr_rpc_get_heap(mlrpc_handle_t *);
561 void ndr_rpc_release(mlrpc_handle_t *);
562 void ndr_rpc_set_nonnull(mlrpc_handle_t *);

564 boolean_t ndr_is_null_handle(mlrpc_handle_t *);
565 boolean_t ndr_is_bind_handle(mlrpc_handle_t *);
566 void ndr_inherit_handle(mlrpc_handle_t *, mlrpc_handle_t *);

568 #ifdef __cplusplus
569 }

```

unchanged portion omitted

new/usr/src/lib/libmlrpc/common/l1ib-lmlrpc

1

1045 Sun Mar 18 01:13:15 2018

new/usr/src/lib/libmlrpc/common/l1ib-lmlrpc

1575 untangle libmlrpc .. (libmlrpc)

```
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19 * CDDL HEADER END
20 */
21 /*
22 * Copyright 2007 Sun Microsystems, Inc. All rights reserved.
23 * Use is subject to license terms.
24 *
25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

26 #pragma ident "%Z%M% %I% %E% SMI"

28 /*LINTLIBRARY*/
29 /*PROTOLIB1*/

31 #include <libmlrpc.h>
31 #include <smbsrv/libmlrpc.h>
```



```

*****
2494 Sun Mar 18 01:13:16 2018
new/usr/src/lib/libmlrpc/common/mapfile-vers
1575 untangle libmlrpc .. (libmlrpc)
*****
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17 # information: Portions Copyright [yyyy] [name of copyright owner]
18 #
19 # CDDL HEADER END
20 #
21 #
22 # Copyright (c) 2007, 2010, Oracle and/or its affiliates. All rights reserved.
23 # Copyright 2013 Nexenta Systems, Inc. All rights reserved.
24 #
25 #
26 #
27 #
28 # MAPFILE HEADER START
29 #
30 # WARNING: STOP NOW. DO NOT MODIFY THIS FILE.
31 # Object versioning must comply with the rules detailed in
32 #
33 #     usr/src/lib/README.mapfiles
34 #
35 # You should not be making modifications here until you've read the most current
36 # copy of that file. If you need help, contact a gatekeeper for guidance.
37 #
38 # MAPFILE HEADER END
39 #
40 #
41 $mapfile_version 2
42 #
43 SYMBOL_VERSION SUNWprivate {
44     global:
45         mlrpc_clh_bind;
46         mlrpc_clh_create;
47         mlrpc_clh_free;
48         mlrpc_clh_unbind;
49 #
50     # Allow debug/test programs to provide these.
51     ndr_printf          { FLAGS = NODIRECT };
52     ndr_trace           { FLAGS = NODIRECT };
53 #
54     ndr_buf_decode;
55     ndr_buf_fini;
56     ndr_buf_init;
57     ndr_clnt_bind;
58     ndr_clnt_call;
59     ndr_clnt_free_heap;
60     ndr_generic_call_stub;
61     ndr_heap_avail;

```

```

62     ndr_heap_create;
63     ndr_heap_destroy;
64     ndr_heap_dupmem;
65     ndr_heap_malloc;
66     ndr_heap_mkvcb;
67     ndr_heap_mkvcs;
68     ndr_heap_mstring;
69     ndr_heap_strdup;
70     ndr_heap_used;
71     ndr_hdalloc;
72     ndr_hdclose;
73     ndr_hdfree;
74     ndr_hdlookup;
75     ndr_inherit_handle;
76     ndr_inner;
77     ndr_is_bind_handle;
78     ndr_is_null_handle;
79     ndr_mbstowcs;
80     ndr_params;
81     ndr_pipe_worker;
82     ndr_rpc_call;
83     ndr_rpc_get_heap;
84     ndr_rpc_get_ssnkey;
85     ndr_rpc_malloc;
86     ndr_rpc_release;
87     ndr_rpc_set_nonull;
88     ndr_svc_binding_pool_init;
89     ndr_svc_lookup_name;
90     ndr_svc_register;
91     ndr_topmost;
92     ndr_uuid_parse;
93     ndr_uuid_unparse;
94 #
95     nds_destruct;
96     nds_initialize;
97 #
98     ndt_char;
99     ndt_s_char;
100    ndt_uchar;
101    ndt_s_uchar;
102    ndt_wchar;
103    ndt_s_wchar;
104    ndt_short;
105    ndt_s_short;
106    ndt_ushort;
107    ndt_s_ushort;
108    ndt_long;
109    ndt_s_long;
110    ndt_ulong;
111    ndt_s_ulong;
112 #
113     local:
114         *;
115 };

```

```

*****
13545 Sun Mar 18 01:13:16 2018
new/usr/src/lib/libmlrpc/common/mlrpc_clh.c
1575 untangle libmlrpc .. (libmlrpc)
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23  * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
24  * Use is subject to license terms.
25  *
26  * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
27  */

29 /*
30  * ML-RPC Client handle interface and support functions.
31  */

33 #include <sys/types.h>
34 #include <sys/fcntl.h>
35 #include <sys/poll.h>

37 #include <errno.h>
38 #include <strings.h>
39 #include <unistd.h>

41 #include <netsmb/smbfs_api.h>
42 #include <smb/ntstatus.h>
43 #include <libmlrpc.h>

45 #include <assert.h>

47 static int ndr_xa_init(ndr_client_t *, ndr_xa_t *);
48 static int ndr_xa_exchange(ndr_client_t *, ndr_xa_t *);
49 static int ndr_xa_read(ndr_client_t *, ndr_xa_t *);
50 static void ndr_xa_preserve(ndr_client_t *, ndr_xa_t *);
51 static void ndr_xa_destruct(ndr_client_t *, ndr_xa_t *);
52 static void ndr_xa_release(ndr_client_t *);

54 /* See notes in mlrpc_clh_bind */
55 int rpc_pipe_open_retries = 10;

57 /*
58  * Create an RPC client binding handle using the given smb_ctx.
59  * That context must already have a session and tree connected.
60  *
61  * Returns zero or an errno value.

```

```

62 */
63 int
64 mlrpc_clh_create(mlrpc_handle_t *handle, void *ctx)
65 {
66     ndr_client_t *clnt = NULL;

68     if (ctx == NULL)
69         return (EINVAL);

71     /*
72      * Allocate...
73      */
74     if ((clnt = malloc(sizeof (*clnt))) == NULL)
75         return (ENOMEM);
76     bzero(clnt, sizeof (*clnt));

78     clnt->xa_fd = -1;

80     /*
81      * Setup the transport functions.
82      * Always a named pipe (for now).
83      */
84     clnt->xa_private = ctx;
85     clnt->xa_init = ndr_xa_init;
86     clnt->xa_exchange = ndr_xa_exchange;
87     clnt->xa_read = ndr_xa_read;
88     clnt->xa_preserve = ndr_xa_preserve;
89     clnt->xa_destruct = ndr_xa_destruct;
90     clnt->xa_release = ndr_xa_release;

92     /* See _is_bind_handle */
93     clnt->handle = &handle->handle;

95     ndr_svc_binding_pool_init(&clnt->binding_list,
96                             clnt->binding_pool, NDR_N_BINDING_POOL);

98     if ((clnt->heap = ndr_heap_create()) == NULL)
99         goto nomem;

101     /* success! */
102     bzero(handle, sizeof (*handle));
103     handle->clnt = clnt;
104     return (0);

106 nomem:
107     free(clnt);
108     return (ENOMEM);
109 }

112 /*
113  * This call must be made to initialize an RPC client structure and bind
114  * to the remote service before any RPCs can be exchanged with that service.
115  *
116  * The mlrpc_handle_t is a wrapper that is used to associate an RPC handle
117  * with the client context for an instance of the interface. The handle
118  * is zeroed to ensure that it doesn't look like a valid handle -
119  * handle content is provided by the remote service.
120  *
121  * The client points to this top-level handle so that we know when to
122  * unbind and teardown the connection. As each handle is initialized it
123  * will inherit a reference to the client context.
124  *
125  *
126  * Similar to MSRPC RpcBindingBind()
127  */

```

```

128 * Returns 0 or an NT_STATUS:      (failed in...)
129 *
130 *   RPC_NT_SERVER_TOO_BUSY        (open pipe)
131 *   RPC_NT_SERVER_UNAVAILABLE     (open pipe)
132 *   NT_STATUS_ACCESS_DENIED       (open pipe)
133 *   NT_STATUS_INVALID_PARAMETER   (rpc bind)
134 *   NT_STATUS_INTERNAL_ERROR      (bad args etc)
135 *   NT_STATUS_NO_MEMORY
136 */
137 uint32_t
138 mlrpc_clh_bind(mlrpc_handle_t *handle, ndr_service_t *svc)
139 {
140     ndr_client_t      *clnt = NULL;
141     struct smb_ctx    *ctx = NULL;
142     uint32_t          status = 0;
143     int               fd = -1;
144     int               rc, retries;
145
146     if ((clnt = handle->clnt) == NULL)
147         return (NT_STATUS_INTERNAL_ERROR);
148     if ((ctx = clnt->xa_private) == NULL)
149         return (NT_STATUS_INTERNAL_ERROR);
150     if (clnt->xa_fd != -1)
151         return (NT_STATUS_INTERNAL_ERROR);
152
153     /*
154      * Open the named pipe.
155      *
156      * Sometimes a DC may return NT_STATUS_PIPE_NOT_AVAILABLE for
157      * the first few seconds during service auto-start. The client
158      * translates that to EBUSY, so when we see that, wait a bit
159      * and retry the open for up to rpc_pipe_open_retries. If we
160      * fail even after retries, return RPC_NT_SERVER_TOO_BUSY,
161      * which is how callers of this layer expect that reported.
162      * We try up to 10 times, with a 0.5 sec. wait after each
163      * BUSY failure, giving a total wait here of 5 sec.
164      */
165     retries = rpc_pipe_open_retries;
166     retry_open:
167     fd = smb_fh_open(ctx, svc->endpoint, O_RDWR);
168     if (fd < 0) {
169         rc = errno;
170         switch (rc) {
171             case EBUSY:
172                 if (--retries > 0) {
173                     (void) poll(NULL, 0, 500);
174                     goto retry_open;
175                 }
176                 status = RPC_NT_SERVER_TOO_BUSY;
177                 break;
178             case EACCES:
179                 status = NT_STATUS_ACCESS_DENIED;
180                 break;
181             default:
182                 status = RPC_NT_SERVER_UNAVAILABLE;
183                 break;
184         }
185         return (status);
186     }
187
188     clnt->xa_fd = fd;
189
190     /* Paranoia, in case of re-bind. */
191     bzero(&handle->handle, sizeof (ndr_hdid_t));
192
193     /*

```

```

194     * Do the OtW RPC bind.
195     */
196     rc = ndr_clnt_bind(clnt, svc, &clnt->binding);
197     switch (rc) {
198     case NDR_DRC_FAULT_OUT_OF_MEMORY:
199         status = NT_STATUS_NO_MEMORY;
200         break;
201     case NDR_DRC_FAULT_API_SERVICE_INVALID:
202         /* svc->..._uuid parse errors */
203         status = NT_STATUS_INTERNAL_ERROR;
204         break;
205     default:
206         if (NDR_DRC_IS_FAULT(rc)) {
207             status = RPC_NT_PROTOCOL_ERROR;
208             break;
209         }
210         /* FALLTHROUGH */
211     case NDR_DRC_OK:
212         status = NT_STATUS_SUCCESS;
213     }
214
215     if (status != 0) {
216         if (fd != -1)
217             (void) smb_fh_close(fd);
218         clnt->xa_fd = -1;
219     }
220
221     return (status);
222 }
223
224 /*
225 * Unbind and close the pipe to an RPC service.
226 *
227 * Similar to MSRPC RpcBindingUnbind()
228 * This should be called after a dropped connection.
229 */
230 void
231 mlrpc_clh_unbind(mlrpc_handle_t *handle)
232 {
233     ndr_client_t *clnt = handle->clnt;
234
235     if (clnt->xa_fd != -1) {
236         (void) smb_fh_close(clnt->xa_fd);
237         clnt->xa_fd = -1;
238     }
239 }
240
241 /*
242 * If the heap has been preserved we need to go through an xa release.
243 * The heap is preserved during an RPC call because that's where data
244 * returned from the server is stored.
245 *
246 * Otherwise we destroy the heap directly.
247 *
248 * Returns the xa_private pointer (if non-NULL) to inform the caller
249 * that it can now be destroyed.
250 */
251 void *
252 mlrpc_clh_free(mlrpc_handle_t *handle)
253 {
254     ndr_client_t *clnt = handle->clnt;
255     void *private;
256
257     if (clnt == NULL)
258         return (NULL);

```

```

260 /*
261  * Should never get an unbind on inherited handles.
262  * Callers of ndr_inherit_handle() check handles
263  * with ndr_is_bind_handle() before calling this.
264  *
265  * Maybe make this function more tolerant?
266  */
267 assert(handle->clnt->handle == &handle->handle);

269 mlrpc_clh_unbind(handle);

271 if (clnt->heap_preserved)
272     ndr_clnt_free_heap(clnt); /* xa_release */
273 else
274     ndr_heap_destroy(clnt->heap);

276 /*
277  * Note: Caller will free the smb_ctx stored in
278  * clnt->xa_private (or possibly reuse it).
279  */
280 private = clnt->xa_private;
281 free(clnt);
282 bzero(handle, sizeof (*handle));
283 return (private);
284 }

286 /*
287  * Call the RPC function identified by opnum. The remote service is
288  * identified by the handle, which should have been initialized by
289  * ndr_rpc_bind.
290  *
291  * If the RPC call is successful (returns 0), the caller must call
292  * ndr_rpc_release to release the heap. Otherwise, we release the
293  * heap here.
294  */
295 int
296 ndr_rpc_call(mlrpc_handle_t *handle, int opnum, void *params)
297 {
298     ndr_client_t *clnt = handle->clnt;
299     int rc;

301     if (ndr_rpc_get_heap(handle) == NULL)
302         return (-1);

304     rc = ndr_clnt_call(clnt->binding, opnum, params);

306     /*
307      * Always clear the nonull flag to ensure
308      * it is not applied to subsequent calls.
309      */
310     clnt->nonull = B_FALSE;

312     if (NDR_DRC_IS_FAULT(rc)) {
313         ndr_rpc_release(handle);
314         return (-1);
315     }

317     return (0);
318 }

320 /*
321  * Outgoing strings should not be null terminated.
322  */
323 void
324 ndr_rpc_set_nonull(mlrpc_handle_t *handle)
325 {

```

```

326     handle->clnt->nonull = B_TRUE;
327 }

329 /*
330  * Get the session key from a bound RPC client handle.
331  *
332  * The key returned is the 16-byte "user session key"
333  * established by the underlying authentication protocol
334  * (either Kerberos or NTLM). This key is needed for
335  * SAM RPC calls such as SamrSetInformationUser, etc.
336  * See [MS-SAMR] sections: 2.2.3.3, 2.2.7.21, 2.2.7.25.
337  *
338  * Returns zero (success) or an errno.
339  */
340 int
341 ndr_rpc_get_ssnkey(mlrpc_handle_t *handle, uchar_t *key, size_t len)
342 {
343     ndr_client_t *clnt = handle->clnt;

345     if (clnt == NULL || clnt->xa_fd == -1)
346         return (EINVAL);

348     return (smb_fh_getssnkey(clnt->xa_fd, key, len));
349 }

351 void *
352 ndr_rpc_malloc(mlrpc_handle_t *handle, size_t size)
353 {
354     ndr_heap_t *heap;

356     if ((heap = ndr_rpc_get_heap(handle)) == NULL)
357         return (NULL);

359     return (ndr_heap_malloc(heap, size));
360 }

362 ndr_heap_t *
363 ndr_rpc_get_heap(mlrpc_handle_t *handle)
364 {
365     ndr_client_t *clnt = handle->clnt;

367     if (clnt->heap == NULL)
368         clnt->heap = ndr_heap_create();

370     return (clnt->heap);
371 }

373 /*
374  * Must be called by RPC clients to free the heap after a successful RPC
375  * call, i.e. ndr_rpc_call returned 0. The caller should take a copy
376  * of any data returned by the RPC prior to calling this function because
377  * returned data is in the heap.
378  */
379 void
380 ndr_rpc_release(mlrpc_handle_t *handle)
381 {
382     ndr_client_t *clnt = handle->clnt;

384     if (clnt->heap_preserved)
385         ndr_clnt_free_heap(clnt);
386     else
387         ndr_heap_destroy(clnt->heap);

389     clnt->heap = NULL;
390 }

```

```

392 /*
393  * Returns true if the handle is null.
394  * Otherwise returns false.
395  */
396 boolean_t
397 ndr_is_null_handle(mlrpc_handle_t *handle)
398 {
399     static const ndr_hdid_t hdid0 = {0};
400
401     if (handle == NULL || handle->clnt == NULL)
402         return (B_TRUE);
403
404     if (!memcmp(&handle->handle, &hdid0, sizeof (hdid0)))
405         return (B_TRUE);
406
407     return (B_FALSE);
408 }
409
410 /*
411  * Returns true if the handle is the top level bind handle.
412  * Otherwise returns false.
413  */
414 boolean_t
415 ndr_is_bind_handle(mlrpc_handle_t *handle)
416 {
417     return (handle->clnt->handle == &handle->handle);
418 }
419
420 /*
421  * Pass the client reference from parent to child.
422  */
423 void
424 ndr_inherit_handle(mlrpc_handle_t *child, mlrpc_handle_t *parent)
425 {
426     child->clnt = parent->clnt;
427 }
428
429 /*
430  * ndr_rpc_status remains in libmlsvc mlsvc_client.c
431  */
432
433 /*
434  * The following functions provide the client callback interface.
435  * If the caller hasn't provided a heap, create one here.
436  */
437 static int
438 ndr_xa_init(ndr_client_t *clnt, ndr_xa_t *mxa)
439 {
440     ndr_stream_t *recv_nds = &mxa->recv_nds;
441     ndr_stream_t *send_nds = &mxa->send_nds;
442     ndr_heap_t *heap = clnt->heap;
443     int rc;
444
445     if (heap == NULL) {
446         if ((heap = ndr_heap_create()) == NULL)
447             return (-1);
448
449         clnt->heap = heap;
450     }
451
452     mxa->heap = heap;
453
454     rc = ndr_initialize(send_nds, 0, NDR_MODE_CALL_SEND, heap);
455     if (rc == 0)
456         rc = ndr_initialize(recv_nds, NDR_PDU_SIZE_HINT_DEFAULT,
457                             NDR_MODE_RETURN_RECV, heap);

```

```

459     if (rc != 0) {
460         ndr_destruct(&mxa->recv_nds);
461         ndr_destruct(&mxa->send_nds);
462         ndr_heap_destroy(mxa->heap);
463         mxa->heap = NULL;
464         clnt->heap = NULL;
465         return (-1);
466     }
467
468     if (clnt->nonull)
469         NDS_SETF(send_nds, NDS_F_NONULL);
470
471     return (0);
472 }
473
474 /*
475  * This is the entry point for an RPC client call exchange with
476  * a server, which will result in an smbdrdr SmbTransact request.
477  *
478  * SmbTransact should return the number of bytes received, which
479  * we record as the PDU size, or a negative error code.
480  */
481 static int
482 ndr_xa_exchange(ndr_client_t *clnt, ndr_xa_t *mxa)
483 {
484     ndr_stream_t *recv_nds = &mxa->recv_nds;
485     ndr_stream_t *send_nds = &mxa->send_nds;
486     int err, more, nbytes;
487
488     nbytes = recv_nds->pdu_max_size;
489     err = smb_fh_xactnp(clnt->xa_fd,
490                        send_nds->pdu_size, (char *)send_nds->pdu_base_offset,
491                        &nbytes, (char *)recv_nds->pdu_base_offset, &more);
492     if (err) {
493         recv_nds->pdu_size = 0;
494         return (-1);
495     }
496
497     recv_nds->pdu_size = nbytes;
498     return (0);
499 }
500
501 /*
502  * This entry point will be invoked if the xa-exchange response contained
503  * only the first fragment of a multi-fragment response. The RPC client
504  * code will then make repeated xa-read requests to obtain the remaining
505  * fragments, which will result in smbdrdr SmbReadX requests.
506  *
507  * SmbReadX should return the number of bytes received, in which case we
508  * expand the PDU size to include the received data, or a negative error
509  * code.
510  */
511 static int
512 ndr_xa_read(ndr_client_t *clnt, ndr_xa_t *mxa)
513 {
514     ndr_stream_t *nds = &mxa->recv_nds;
515     int len;
516     int nbytes;
517
518     if ((len = (nds->pdu_max_size - nds->pdu_size)) < 0)
519         return (-1);
520
521     nbytes = smb_fh_read(clnt->xa_fd, 0, len,
522                          (char *)nds->pdu_base_offset + nds->pdu_size);

```

```
524     if (nbytes < 0)
525         return (-1);
527     nds->pdu_size += nbytes;
529     if (nds->pdu_size > nds->pdu_max_size) {
530         nds->pdu_size = nds->pdu_max_size;
531         return (-1);
532     }
534     return (nbytes);
535 }
537 /*
538  * Preserve the heap so that the client application has access to data
539  * returned from the server after an RPC call.
540  */
541 static void
542 ndr_xa_preserve(ndr_client_t *clnt, ndr_xa_t *mxa)
543 {
544     assert(clnt->heap == mxa->heap);
546     clnt->heap_preserved = B_TRUE;
547     mxa->heap = NULL;
548 }
550 /*
551  * Dispose of the transaction streams.  If the heap has not been
552  * preserved, we can destroy it here.
553  */
554 static void
555 ndr_xa_destruct(ndr_client_t *clnt, ndr_xa_t *mxa)
556 {
557     nds_destruct(&mxa->recv_nds);
558     nds_destruct(&mxa->send_nds);
560     if (!clnt->heap_preserved) {
561         ndr_heap_destroy(mxa->heap);
562         mxa->heap = NULL;
563         clnt->heap = NULL;
564     }
565 }
567 /*
568  * Dispose of a preserved heap.
569  */
570 static void
571 ndr_xa_release(ndr_client_t *clnt)
572 {
573     if (clnt->heap_preserved) {
574         ndr_heap_destroy(clnt->heap);
575         clnt->heap = NULL;
576         clnt->heap_preserved = B_FALSE;
577     }
578 }
```

new/usr/src/lib/libmlrpc/common/ndr.h

1

```
*****
16870 Sun Mar 18 01:13:16 2018
new/usr/src/lib/libmlrpc/common/ndr.h
1575 untangle libmlrpc .. (libmlrpc)
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
23 * Use is subject to license terms.
24 *
25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

28 #ifndef _SMBSRV_NDR_H
29 #define _SMBSRV_NDR_H

31 /*
32 * Network Data Representation (NDR) is a compatible subset of DCE RPC
33 * and MSRPC NDR. NDR is used to move parameters consisting of
34 * complicated trees of data constructs between an RPC client and server.
35 *
36 * CAE Specification (1997)
37 * DCE 1.1: Remote Procedure Call
38 * Document Number: C706
39 * The Open Group
40 * ogspecs@opengroup.org
41 */

43 #if defined(_KERNEL) || defined(_FAKE_KERNEL)
44 #error "not used in kernel code"
45 #else /* _KERNEL */
46 #include <sys/types.h>
47 #include <sys/uio.h>
48 #include <syslog.h>
49 #include <stdlib.h>
50 #include <string.h>
51 #include <smbstrv/wintypes.h>
52 #include <smbstrv/ndl/rpcdu.ndl>
53 #include <smbstrv/string.h>
54 #endif /* _KERNEL */

56 #include <smb/wintypes.h>
57 #include <libmlrpc/ndrtypes.ndl>
58 #include <libmlrpc/rpcdu.ndl>

59 #ifdef __cplusplus
60 extern "C" {
```

new/usr/src/lib/libmlrpc/common/ndr.h

2

```
54 #endif

56 /*
57 * Normal sequence:
58 * - Application calls client-side stub w/ TOP-MOST arg structure
59 * - client stub performs NDR_M_OP_MARSHALL+NDR_DIR_IN
60 * - PDU conveyed (request, aka call, aka query)
61 * - server stub performs NDR_M_OP_UNMARSHALL+NDR_DIR_IN
62 * - server function called w/ TOP-MOST arg structure
63 * - server function returns w/ TOP-MOST arg structure modified
64 * - server stub performs NDR_M_OP_MARSHALL+NDR_DIR_OUT
65 * - PDU conveyed (reply, aka result, aka response)
66 * - client stub performs NDR_M_OP_UNMARSHALL+NDR_DIR_OUT
67 * - return to Application w/ TOP-MOST arg structure modified
68 */
69 * An interface is a sequence of top-most constructs. Each top-most
70 * construct corresponds to one parameter, either argument or return
71 * value.
72 *
73 * A top-most construct is a sequence of outer constructs. The first
74 * outer construct is the referent of the argument, and the subsequent
75 * outer constructs are descendents referenced by pointers from prior
76 * constructs.
77 *
78 * An outer construct is a sequence of variable-sized info, fixed-sized
79 * data, and variable-sized data.
80 */

82 /*
83 * Terminology
84 *
85 * The ALL UPPER CASE terms recur in the DCE/RPC documentation.
86 * The mixed-case names have been introduced as a reading aid.
87 *
88 * Size The size of an array in elements. Think of this
89 * as the amount to malloc().
90 *
91 * Length The number of elements of an array which are significant
92 * Think of this as the amount to bcopy().
93 *
94 * Known Size/length is known at build time.
95 *
96 * Determined Size/length is determined at run time.
97 *
98 * FIXED The Size and Length are Known.
99 * Think of this as a string constant or a DOS 8.3 file name.
100 * char array[] = "A Constant Size/Length";
101 *
102 * CONFORMANT The Size is Determined. Length is the same as Size.
103 * Think of this as strdup().
104 * char *array = strdup("Something");
105 *
106 * VARYING The Size is Known. The Length is determined.
107 * Think of this as a strcpy() of a variable length string
108 * into a fixed length buffer:
109 * char array[100];
110 * strcpy(array, "very short string");
111 *
112 * VARYING/CONFORMANT The Size is Determined. The Length is separately Determined.
113 * Think of this like:
114 * char *array = malloc(size);
115 * strcpy(array, "short string");
116 *
117 *
118 * STRING Strings can be CONFORMANT, VARYING, or CONFORMANT/VARYING.
119 * A string is fundamentally an array with the last
```

```

120 *          significant element some sort of NULL.
121 */

123 #define NDR_F_NONE          0x0000 /* no flags */
124 #define NDR_F_PARAMS_MASK  0x00FF
125 #define NDR_F_SIZE_IS      0x0001 /* [size_is(X)] required/given */
126 #define NDR_F_LENGTH_IS    0x0002 /* not implemented */
127 #define NDR_F_SWITCH_IS    0x0004 /* [switch_is(X)] req./given */
128 #define NDR_F_IS_STRING    0x0008 /* [string] req./given */
129 #define NDR_F_IS_POINTER    0x0010 /* TYPE * ... req./given */
130 #define NDR_F_IS_REFERENCE 0x0020 /* TYPE & ... req./given */
131 #define NDR_F_DIMENSION_IS 0x0040 /* TYPE [N] req./given */

133 #define NDR_F_WHENCE_MASK  0x00F0
134 #define NDR_F_BACKPTR      0x0010 /* ref cause by pointer */
135 #define NDR_F_OUTER        0x0020 /* ref caused by outer */
136 #define NDR_F_TOPMOST     0x0040 /* ref caused by topmost */

138 #define NDR_F_TYPEOP_MASK  0x0F00
139 #define NDR_F_ARRAY         0x0100 /* type is array of somethings */
140 #define NDR_F_POINTER      0x0200 /* type is pointer to something(s) */
141 #define NDR_F_STRING       0x0300 /* type is string of somethings */
142 #define NDR_F_UNION        0x0400 /* type is a union */
143 #define NDR_F_STRUCT       0x0500 /* type is a structure */
144 #define NDR_F_OPERATION    0x0600 /* type is a structure, special */
145 #define NDR_F_INTERPACE    0x0700 /* type is a union, special */
146 #define NDR_F_CONFORMANT   0x1000 /* struct conforming (var-size tail) */
147 #define NDR_F_VARYING      0x2000 /* not implemented */

149 struct ndr_heap;
150 struct ndr_stream;
151 struct ndr_reference;

153 typedef uint16_t ndr_wchar_t;

155 typedef struct ndr_typeinfo {
156     unsigned char    version;          /* sanity check */
157     unsigned char    alignment;       /* mask */
158     unsigned short   type_flags;     /* NDR_F_... */
159     int              (*ndr_func)(struct ndr_reference *);
160     unsigned short   pdu_size_fixed_part;
161     unsigned short   pdu_size_variable_part;
162     unsigned short   c_size_fixed_part;
163     unsigned short   c_size_variable_part;
164 } ndr_typeinfo_t;
  unchanged portion omitted

255 #define NDR_M_OP_NONE      0x00
256 #define NDR_M_OP_MARSHALL  0x01 /* data moving from datum to PDU */
257 #define NDR_M_OP_UNMARSHALL 0x02 /* data moving from PDU to datum */

259 #define NDR_DIR_NONE      0x00
260 #define NDR_DIR_IN       0x10 /* data moving from caller to callee */
261 #define NDR_DIR_OUT      0x20 /* data moving from callee to caller */

263 #define NDR_MODE_CALL_SEND (NDR_M_OP_MARSHALL + NDR_DIR_IN)
264 #define NDR_MODE_CALL_RECV (NDR_M_OP_UNMARSHALL + NDR_DIR_IN)
265 #define NDR_MODE_RETURN_SEND (NDR_M_OP_MARSHALL + NDR_DIR_OUT)
266 #define NDR_MODE_RETURN_RECV (NDR_M_OP_UNMARSHALL + NDR_DIR_OUT)
267 #define NDR_MODE_BUF_ENCODE NDR_MODE_CALL_SEND
268 #define NDR_MODE_BUF_DECODE NDR_MODE_RETURN_RECV

270 #define NDR_MODE_TO_M_OP(MODE) ((MODE) & 0x0F)
271 #define NDR_MODE_TO_DIR(MODE) ((MODE) & 0xF0)
272 #define NDR_M_OP_AND_DIR_TO_MODE(M_OP, DIR) ((M_OP)|(DIR))

```

```

274 #define NDR_MODE_MATCH(NDS, MODE) \
275     (NDR_M_OP_AND_DIR_TO_MODE((NDS)->m_op, (NDS)->dir) == (MODE))

277 #define NDR_IS_FIRST_FRAG(F) ((F) & NDR_PFC_FIRST_FRAG)
278 #define NDR_IS_LAST_FRAG(F) ((F) & NDR_PFC_LAST_FRAG)
279 #define NDR_IS_SINGLE_FRAG(F) \
280     (NDR_IS_FIRST_FRAG((F)) && NDR_IS_LAST_FRAG((F)))

282 #define NDS_F_NONE          0x00
283 #define NDS_F_NOTERM       0x01 /* strings are not null terminated */
284 #define NDS_F_NONULL      0x02 /* strings: no null on size_is */
285 #define NDS_SETF(S, F)    ((S)->flags |= (F))
286 #define NDS_CLEARF(S, F) ((S)->flags &= ~(F))

288 #define NDR_ERR_MALLOC_FAILED -1
289 #define NDR_ERR_M_OP_INVALID -2
290 #define NDR_ERR_UNDERFLOW -3
291 #define NDR_ERR_GROW_FAILED -4 /* overflow */
292 #define NDR_ERR_PAD_FAILED -5 /* couldn't possibly happen */
293 #define NDR_ERR_OUTER_HEADER_BAD -6
294 #define NDR_ERR_SWITCH_VALUE_ILLEGAL -7
295 #define NDR_ERR_SWITCH_VALUE_INVALID -8
296 #define NDR_ERR_SWITCH_VALUE_MISSING -9
297 #define NDR_ERR_SIZE_IS_MISMATCH_PDU -10
298 #define NDR_ERR_SIZE_IS_MISMATCH_AFTER -11
299 #define NDR_ERR_SIZE_IS_UNEXPECTED -12
300 #define NDR_ERR_SIZE_IS_DUPLICATED -13
301 #define NDR_ERR_OUTER_PARAMS_MISMATCH -14
302 #define NDR_ERR_ARRAY_VARLEN_ILLEGAL -15
303 #define NDR_ERR_ARRAY_UNION_ILLEGAL -16
304 #define NDR_ERR_OUTER_PARAMS_BAD -17
305 #define NDR_ERR_OUTER_UNION_ILLEGAL -18
306 #define NDR_ERR_TOPMOST_UNION_ILLEGAL -19
307 #define NDR_ERR_TOPMOST_VARLEN_ILLEGAL -20
308 #define NDR_ERR_INNER_PARAMS_BAD -21
309 #define NDR_ERR_UNIMPLEMENTED -22
310 #define NDR_ERR_NOT_AN_INTERFACE -23
311 #define NDR_ERR_STRLLEN -24
312 #define NDR_ERR_STRING_SIZING -25
313 #define NDR_ERR_BOUNDS_CHECK -26

315 #define NDR_SET_ERROR(REF, ERROR) \
316     ((REF)->stream->error = (ERROR), \
317     (REF)->stream->error_ref = __LINE__, \
318     NDS_TATTLE_ERROR((REF)->stream, 0, REF))

320 #define NDR_TATTLE(REF, WHAT) \
321     (*(REF)->stream->ndo->ndo_tattle)((REF)->stream, WHAT, REF)

323 #define MEMBER_STR(MEMBER) #MEMBER

325 #define NDR_DIR_IS_IN (encl_ref->stream->dir == NDR_DIR_IN)
326 #define NDR_DIR_IS_OUT (encl_ref->stream->dir == NDR_DIR_OUT)

328 #define NDR_MEMBER_WITH_ARG(TYPE, MEMBER, OFFSET, \
329     ARGFLAGS, ARGMEM, ARGVAL) { \
330     myref.pdu_offset = encl_ref->pdu_offset + (OFFSET); \
331     myref.name = MEMBER_STR(MEMBER); \
332     myref.datum = (char *)&val->MEMBER; \
333     myref.inner_flags = ARGFLAGS; \
334     myref.ti = &ndt_##TYPE; \
335     myref.ARGMEM = ARGVAL; \
336     if (!ndr_inner(&myref)) \
337         return (0); \
338 }

```



```

340 #define NDR_MEMBER(TYPE, MEMBER, OFFSET) \
341     NDR_MEMBER_WITH_ARG(TYPE, MEMBER, OFFSET, \
342         NDR_F_NONE, size_is, 0)

344 #define NDR_MEMBER_ARR_WITH_SIZE_IS(TYPE, MEMBER, OFFSET, SIZE_IS) \
345     NDR_MEMBER_WITH_ARG(TYPE, MEMBER, OFFSET, \
346         NDR_F_SIZE_IS, size_is, SIZE_IS)

348 #define NDR_MEMBER_ARR_WITH_DIMENSION(TYPE, MEMBER, OFFSET, SIZE_IS) \
349     NDR_MEMBER_WITH_ARG(TYPE, MEMBER, OFFSET, \
350         NDR_F_DIMENSION_IS, dimension_is, SIZE_IS)

352 #define NDR_MEMBER_PTR_WITH_SIZE_IS(TYPE, MEMBER, OFFSET, SIZE_IS) \
353     NDR_MEMBER_WITH_ARG(TYPE, MEMBER, OFFSET, \
354         NDR_F_SIZE_IS+NDR_F_IS_POINTER, size_is, SIZE_IS)

356 #define NDR_MEMBER_PTR(TYPE, MEMBER, OFFSET) \
357     NDR_MEMBER_WITH_ARG(TYPE, MEMBER, OFFSET, \
358         NDR_F_IS_POINTER, size_is, 0)

360 #define NDR_MEMBER_WITH_SWITCH_IS(TYPE, MEMBER, OFFSET, SWITCH_IS) \
361     NDR_MEMBER_WITH_ARG(TYPE, MEMBER, OFFSET, \
362         NDR_F_SWITCH_IS, switch_is, SWITCH_IS)

365 #define NDR_TOPMOST_MEMBER_WITH_ARG(TYPE, MEMBER, \
366     ARGFLAGS, ARGMEM, ARGVAL) { \
367     myref.pdu_offset = -1; \
368     myref.name = MEMBER_STR(MEMBER); \
369     myref.datum = (char *)&val->MEMBER; \
370     myref.inner_flags = ARGFLAGS; \
371     myref.ti = &ndt_##TYPE; \
372     myref.ARGMEM = ARGVAL; \
373     if (!ndr_topmost(&myref)) \
374         return (0); \
375 }

377 #define NDR_TOPMOST_MEMBER(TYPE, MEMBER) \
378     NDR_TOPMOST_MEMBER_WITH_ARG(TYPE, MEMBER, \
379         NDR_F_NONE, size_is, 0)

381 #define NDR_TOPMOST_MEMBER_ARR_WITH_SIZE_IS(TYPE, MEMBER, SIZE_IS) \
382     NDR_TOPMOST_MEMBER_WITH_ARG(TYPE, MEMBER, \
383         NDR_F_SIZE_IS, size_is, SIZE_IS)

385 #define NDR_TOPMOST_MEMBER_ARR_WITH_DIMENSION(TYPE, MEMBER, SIZE_IS) \
386     NDR_TOPMOST_MEMBER_WITH_ARG(TYPE, MEMBER, \
387         NDR_F_DIMENSION_IS, dimension_is, SIZE_IS)

389 #define NDR_TOPMOST_MEMBER_PTR_WITH_SIZE_IS(TYPE, MEMBER, SIZE_IS) \
390     NDR_TOPMOST_MEMBER_WITH_ARG(TYPE, MEMBER, \
391         NDR_F_SIZE_IS+NDR_F_IS_POINTER, size_is, SIZE_IS)

393 #define NDR_TOPMOST_MEMBER_PTR(TYPE, MEMBER) \
394     NDR_TOPMOST_MEMBER_WITH_ARG(TYPE, MEMBER, \
395         NDR_F_IS_POINTER, size_is, 0)

397 #define NDR_TOPMOST_MEMBER_REF(TYPE, MEMBER) \
398     NDR_TOPMOST_MEMBER_WITH_ARG(TYPE, MEMBER, \
399         NDR_F_IS_REFERENCE, size_is, 0)

401 #define NDR_TOPMOST_MEMBER_REF_WITH_SIZE_IS(TYPE, MEMBER, SIZE_IS) \
402     NDR_TOPMOST_MEMBER_WITH_ARG(TYPE, MEMBER, \
403         NDR_F_SIZE_IS+NDR_F_IS_REFERENCE, size_is, SIZE_IS)

405 #define NDR_TOPMOST_MEMBER_WITH_SWITCH_IS(TYPE, MEMBER, SWITCH_IS) \

```

```

406     NDR_TOPMOST_MEMBER_WITH_ARG(TYPE, MEMBER, \
407         NDR_F_SWITCH_IS, switch_is, SWITCH_IS)

409 /* this is assuming offset+0 */
410 #define NDR_PARAMS_MEMBER_WITH_ARG(TYPE, MEMBER, ARGFLAGS, \
411     ARGMEM, ARGVAL) { \
412     myref.pdu_offset = encl_ref->pdu_offset; \
413     myref.name = MEMBER_STR(MEMBER); \
414     myref.datum = (char *)&val->MEMBER; \
415     myref.inner_flags = ARGFLAGS; \
416     myref.ti = &ndt_##TYPE; \
417     myref.ARGMEM = ARGVAL; \
418     if (!ndr_params(&myref)) \
419         return (0); \
420 }

422 #define NDR_PARAMS_MEMBER(TYPE, MEMBER) \
423     NDR_PARAMS_MEMBER_WITH_ARG(TYPE, MEMBER, \
424         NDR_F_NONE, size_is, 0)

426 #define NDR_STRING_DIM 1
427 #define NDR_ANYSIZE_DIM 1

429 int ndr_process(struct ndr_stream *, ndr_typeinfo_t *, char *);
430 int ndr_operation(struct ndr_stream *, ndr_typeinfo_t *, int opnum, char *);
431 void ndr_printf(struct ndr_stream *, ndr_ref_t *, const char *, ...);
432 void ndr_trace(const char *);
433 void ndr_fmt(struct ndr_stream *, ndr_ref_t *, char *);

435 int ndr_params(ndr_ref_t *);
436 int ndr_topmost(ndr_ref_t *);
437 int ndr_run_outer_queue(struct ndr_stream *);
438 int ndr_outer(ndr_ref_t *);
439 int ndr_outer_fixed(ndr_ref_t *);
440 int ndr_outer_fixed_array(ndr_ref_t *);
441 int ndr_outer_conformant_array(ndr_ref_t *);
442 int ndr_outer_conformant_construct(ndr_ref_t *);
443 int ndr_size_is(ndr_ref_t *);
444 int ndr_outer_string(ndr_ref_t *);
445 int ndr_outer_peek_sizing(ndr_ref_t *, unsigned, unsigned long *);
446 int ndr_outer_poke_sizing(ndr_ref_t *, unsigned, unsigned long *);
447 int ndr_outer_align(ndr_ref_t *);
448 int ndr_outer_grow(ndr_ref_t *, unsigned);
449 int ndr_inner(ndr_ref_t *);
450 int ndr_inner_pointer(ndr_ref_t *);
451 int ndr_inner_reference(ndr_ref_t *);
452 int ndr_inner_array(ndr_ref_t *);

454 size_t ndr_mbstowcs(struct ndr_stream *, ndr_wchar_t *, const char *, size_t);
458 size_t ndr_mbstowcs(struct ndr_stream *, smb_wchar_t *, const char *, size_t);
459 int ndr_mbtowc(struct ndr_stream *, smb_wchar_t *, const char *, size_t);

456 void nds_bswap(void *src, void *dst, size_t len);

458 #ifdef __cplusplus
459 }
_____unchanged_portion_omitted_____

```

```

*****
8387 Sun Mar 18 01:13:16 2018
new/usr/src/lib/libmlrpc/common/ndr_client.c
1575 untangle libmlrpc .. (libmlrpc)
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright 2010 Sun Microsystems, Inc. All rights reserved.
23 * Use is subject to license terms.
24 *
25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

28 #include <sys/errno.h>
29 #include <string.h>
30 #include <strings.h>

32 #include <libmlrpc.h>
30 #include <smbsrv/lib smb.h>
31 #include <smbsrv/libmlrpc.h>

34 #define NDR_DEFAULT_FRAGSZ      8192
35 #define NDR_MULTI_FRAGSZ      (60 * 1024)

37 static void ndr_clnt_init_hdr(ndr_client_t *, ndr_xa_t *);
38 static int ndr_clnt_get_frags(ndr_client_t *, ndr_xa_t *);
39 static int ndr_clnt_get_frag(ndr_client_t *, ndr_xa_t *, ndr_common_header_t *);

41 int
42 ndr_clnt_bind(ndr_client_t *clnt, ndr_service_t *msvc,
41 ndr_clnt_bind(ndr_client_t *clnt, const char *service_name,
43 ndr_binding_t **ret_binding_p)
44 {
44     ndr_service_t      *msvc;
45     ndr_binding_t      *mbind;
46     ndr_xa_t           mxa;
47     ndr_bind_hdr_t     *bhdr;
48     ndr_p_cont_elem_t  *pce;
49     ndr_bind_ack_hdr_t *bahdr;
50     ndr_p_result_t     *pre;
51     int                rc;

53     bzero(&mx, sizeof (mx));

55     msvc = ndr_svc_lookup_name(service_name);
56     if (msvc == NULL)
57         return (NDR_DRC_FAULT_API_SERVICE_INVALID);

```

```

55     mxa.binding_list = clnt->binding_list;
56     if ((mbind = ndr_svc_new_binding(&mx)) == NULL)
57         return (NDR_DRC_FAULT_API_BIND_NO_SLOTS);

59     ndr_clnt_init_hdr(clnt, &mx);

61     bhdr = &mx.send_hdr.bind_hdr;
62     bhdr->common_hdr.p_type = NDR_PTYPE_BIND;
63     bhdr->common_hdr.frag_length = sizeof (*bhdr);
64     bhdr->max_xmit_frag = NDR_DEFAULT_FRAGSZ;
65     bhdr->max_recv_frag = NDR_DEFAULT_FRAGSZ;
66     bhdr->assoc_group_id = 0;
67     bhdr->p_context_elem.n_context_elem = 1;

69     /* Assign presentation context id */
70     pce = &bhdr->p_context_elem.p_cont_elem[0];
71     pce->p_cont_id = clnt->next_p_cont_id++;
72     pce->n_transfer_syn = 1;

74     /* Set up UUIDs and versions from the service */
75     pce->abstract_syntax.if_version = msvc->abstract_syntax_version;
76     rc = ndr_uuid_parse(msvc->abstract_syntax_uuid,
77 &pce->abstract_syntax.if_uuid);
78     if (rc != 0)
79         return (NDR_DRC_FAULT_API_SERVICE_INVALID);

81     pce->transfer_syntaxes[0].if_version = msvc->transfer_syntax_version;
82     rc = ndr_uuid_parse(msvc->transfer_syntax_uuid,
83 &pce->transfer_syntaxes[0].if_uuid);
84     if (rc != 0)
85         return (NDR_DRC_FAULT_API_SERVICE_INVALID);

87     /* Format and exchange the PDU */

89     if ((*clnt->xa_init)(clnt, &mx) < 0)
90         return (NDR_DRC_FAULT_OUT_OF_MEMORY);

92     rc = ndr_encode_pdu_hdr(&mx);
93     if (NDR_DRC_IS_FAULT(rc))
94         goto fault_exit;

96     if ((*clnt->xa_exchange)(clnt, &mx) < 0) {
97         rc = NDR_DRC_FAULT_SEND_FAILED;
98         goto fault_exit;
99     }

101     rc = ndr_decode_pdu_hdr(&mx);
102     if (NDR_DRC_IS_FAULT(rc))
103         goto fault_exit;

105     /* done with buffers */
106     (*clnt->xa_destruct)(clnt, &mx);

108     bahdr = &mx.recv_hdr.bind_ack_hdr;

110     if (mx.p_type != NDR_PTYPE_BIND_ACK)
111         return (NDR_DRC_FAULT_RECEIVED_MALFORMED);

113     if (bahdr->p_result_list.n_results != 1)
114         return (NDR_DRC_FAULT_RECEIVED_MALFORMED);

116     pre = &bahdr->p_result_list.p_results[0];

118     if (pre->result != NDR_PCDR_ACCEPTANCE)
119         return (NDR_DRC_FAULT_RECEIVED_MALFORMED);

```

```

121     mbind->p_cont_id = pce->p_cont_id;
122     mbind->which_side = NDR_BIND_SIDE_CLIENT;
123     mbind->clnt = clnt;
124     mbind->service = msvc;
125     mbind->instance_specific = 0;

127     *ret_binding_p = mbind;
128     return (NDR_DRC_OK);

130 fault_exit:
131     (*clnt->xa_destruct)(clnt, &mx);
132     return (rc);
133 }

135 int
136 ndr_clnt_call(ndr_binding_t *mbind, int opnum, void *params)
137 {
138     ndr_client_t      *clnt = mbind->clnt;
139     ndr_service_t     *msvc = mbind->service;
140     ndr_xa_t          mxa;
141     ndr_request_hdr_t *reqhdr;
142     ndr_common_header_t *rsphdr;
143     unsigned long     recv_pdu_scan_offset;
144     int                rc;

145     if (ndr_svc_lookup_name(msvc->name) == NULL)
146         return (NDR_DRC_FAULT_API_SERVICE_INVALID);

147     bzero(&mx, sizeof (mx));
148     mxa.ptype = NDR_PTYPE_REQUEST;
149     mxa.opnum = opnum;
150     mxa.binding = mbind;

151     ndr_clnt_init_hdr(clnt, &mx);

152     reqhdr = &mx.send_hdr.request_hdr;
153     reqhdr->common_hdr.ptype = NDR_PTYPE_REQUEST;
154     reqhdr->p_cont_id = mbind->p_cont_id;
155     reqhdr->opnum = opnum;

156     rc = (*clnt->xa_init)(clnt, &mx);
157     if (NDR_DRC_IS_FAULT(rc))
158         return (rc);

159     /* Reserve room for hdr */
160     mxa.send_nds.pdu_scan_offset = sizeof (*reqhdr);

161     rc = ndr_encode_call(&mx, params);
162     if (!NDR_DRC_IS_OK(rc))
163         goto fault_exit;

164     mxa.send_nds.pdu_scan_offset = 0;

165     /*
166      * Now we have the PDU size, we need to set up the
167      * frag_length and calculate the alloc_hint.
168      */
169     mxa.send_hdr.common_hdr.frag_length = mxa.send_nds.pdu_size;
170     reqhdr->alloc_hint = mxa.send_nds.pdu_size -
171         sizeof (ndr_request_hdr_t);

172     rc = ndr_encode_pdu_hdr(&mx);
173     if (NDR_DRC_IS_FAULT(rc))
174         goto fault_exit;

```

```

182     rc = (*clnt->xa_exchange)(clnt, &mx);
183     if (NDR_DRC_IS_FAULT(rc))
184         goto fault_exit;

186     rc = ndr_decode_pdu_hdr(&mx);
187     if (NDR_DRC_IS_FAULT(rc))
188         goto fault_exit;

190     if (mx.ptype != NDR_PTYPE_RESPONSE) {
191         rc = NDR_DRC_FAULT_RECEIVED_MALFORMED;
192         goto fault_exit;
193     }

195     rsphdr = &mx.recv_hdr.common_hdr;

197     if (!NDR_IS_LAST_FRAG(rsphdr->pfc_flags)) {
198         /*
199          * This is a multi-fragment response.
200          * Preserve the current scan offset while getting
201          * fragments so that we can continue afterward
202          * as if we had received the entire response as
203          * a single PDU.
204          */
205         (void) NDS_GROW_PDU(&mx.recv_nds, NDR_MULTI_FRAGSZ, NULL);

206         recv_pdu_scan_offset = mx.recv_nds.pdu_scan_offset;
207         mxa.recv_nds.pdu_scan_offset = rsphdr->frag_length;
208         mxa.recv_nds.pdu_size = rsphdr->frag_length;

209         if (ndr_clnt_get_frags(clnt, &mx) < 0) {
210             rc = NDR_DRC_FAULT_RECEIVED_MALFORMED;
211             goto fault_exit;
212         }

213         mxa.recv_nds.pdu_scan_offset = recv_pdu_scan_offset;
214     }

215     rc = ndr_decode_return(&mx, params);
216     if (NDR_DRC_IS_FAULT(rc))
217         goto fault_exit;

218     (*clnt->xa_preserve)(clnt, &mx);
219     (*clnt->xa_destruct)(clnt, &mx);
220     return (NDR_DRC_OK);

221 fault_exit:
222     (*clnt->xa_destruct)(clnt, &mx);
223     return (rc);
224 }

```

unchanged portion omitted

```

*****
7712 Sun Mar 18 01:13:16 2018
new/usr/src/lib/libmlrpc/common/ndr_heap.c
1575 untangle libmlrpc .. (libmlrpc)
*****
1 /*
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3  *
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15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
23 * Use is subject to license terms.
24 *
25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

28 /*
29 * NDR heap management. The heap is used for temporary storage by
30 * both the client and server side library routines. In order to
31 * support the different requirements of the various RPCs, the heap
32 * can grow dynamically if required. We start with a single block
33 * and perform sub-allocations from it. If an RPC requires more space
34 * we will continue to add it a block at a time. This means that we
35 * don't hog lots of memory on every call to support the few times
36 * that we actually need a lot heap space.
37 *
38 * Note that there is no individual free function. Once space has been
39 * allocated, it remains allocated until the heap is destroyed. This
40 * shouldn't be an issue because the heap is being filled with data to
41 * be marshalled or unmarshalled and we need it all to be there until
42 * the point that the entire heap is no longer required.
43 */

45 #include <sys/errno.h>
46 #include <stdlib.h>
47 #include <string.h>
48 #include <strings.h>
49 #include <sys/uid.h>

51 #include <libmlrpc.h>
52 #include <ndr_wchar.h>
53 #include <smbsrv/lib smb.h>
54 #include <smbsrv/libmlrpc.h>
55 #include <smbsrv/smb_sid.h>

54 /*
55 * Allocate a heap structure and the first heap block. For many RPC
56 * operations this will be the only time we need to malloc memory
57 * in this instance of the heap. The only point of note here is that
58 * we put the heap management data in the first block to avoid a

```

```

59 * second malloc. Make sure that sizeof(ndr_heap_t) is smaller
60 * than NDR_HEAP_BLKSIZE.
61 *
62 * Note that the heap management data is at the start of the first block.
63 *
64 * Returns a pointer to the newly created heap, which is used like an
65 * opaque handle with the rest of the heap management interface..
66 */
67 ndr_heap_t *
68 ndr_heap_create(void)
69 {
70     ndr_heap_t *heap;
71     char *base;
72     size_t allocsize = sizeof (ndr_heap_t) + NDR_HEAP_BLKSIZE;

74     if ((heap = malloc(allocsize)) == NULL)
75         return (NULL);

77     base = (char *)heap;
78     bzero(heap, sizeof (ndr_heap_t));

80     heap->iovcnt = NDR_HEAP_MAXIOV;
81     heap->iov = heap->iovec;
82     heap->iov->iiov_base = base;
83     heap->iov->iiov_len = sizeof (ndr_heap_t);
84     heap->top = base + allocsize;
85     heap->next = base + sizeof (ndr_heap_t);

87     return (heap);
88 }
    unchanged_portion_omitted

157 /*
158 * Convenience function to copy some memory into the heap.
159 */
160 void *
161 ndr_heap_dupmem(ndr_heap_t *heap, const void *mem, size_t len)
162 {
163     void *p;

165     if (mem == NULL)
166         return (NULL);

168     if ((p = ndr_heap_malloc(heap, len)) != NULL)
169         (void) memcpy(p, mem, len);

171     return (p);
172 }

174 /*
175 * Convenience function to do heap strdup.
176 */
177 void *
178 ndr_heap_strdup(ndr_heap_t *heap, const char *s)
179 {
180     int len;
181     void *p;

183     if (s == NULL)
184         return (NULL);

186     /*
187      * We don't need to clutter the heap with empty strings.
188      */
189     if ((len = strlen(s)) == 0)
190         return ("");

```

```

192     p = ndr_heap_dupmem(heap, s, len+1);
174     if ((p = ndr_heap_malloc(heap, len+1)) != NULL)
175         (void) strcpy((char *)p, s);

194     return (p);
195 }

197 /*
198  * Make an ndr_mstring_t from a regular string.
199  */
200 int
201 ndr_heap_mstring(ndr_heap_t *heap, const char *s, ndr_mstring_t *out)
202 {
203     size_t slen;

205     if (s == NULL || out == NULL)
206         return (-1);

208     /*
209      * Determine the WC strlen of s
210      * Was ndr_wcequiv_strlen(s)
211      */
212     slen = ndr__mbstowcs(NULL, s, NDR_STRING_MAX);
213     if (slen == (size_t)-1)
214         return (-1);
215     out->length = smb_wcequiv_strlen(s);
216     out->allosize = out->length + sizeof (smb_wchar_t);

217     out->length = slen * sizeof (ndr_wchar_t);
218     out->allosize = out->length + sizeof (ndr_wchar_t);

219     if ((out->str = ndr_heap_strdup(heap, s)) == NULL)
220         return (-1);

222     return (0);
223 }

225 /*
226  * Our regular string marshalling always creates null terminated strings
227  * but some Windows clients and servers are pedantic about the string
228  * formats they will accept and require non-null terminated strings.
229  * This function can be used to build a wide-char, non-null terminated
230  * string in the heap as a varying/conformant array. We need to do the
231  * wide-char conversion here because the marshalling code won't be
232  * aware that this is really a string.
233  */
234 void
235 ndr_heap_mkvcvs(ndr_heap_t *heap, char *s, ndr_vcstr_t *vc)
236 {
237     size_t slen;
238     int mlen;

240     /*
241      * Determine the WC strlen of s
242      * Was ndr_wcequiv_strlen(s)
243      */
244     slen = ndr__mbstowcs(NULL, s, NDR_STRING_MAX);
245     if (slen == (size_t)-1)
246         slen = 0;

248     vc->wclen = slen * sizeof (ndr_wchar_t);
249     vc->wclen = smb_wcequiv_strlen(s);
250     vc->wsize = vc->wclen;

```

```

251     /*

```

```

252     * alloc one extra wchar for a null
253     * See slen + 1 arg for mbstowcs
254     */
255     mlen = sizeof (ndr_vcstr_t) + vc->wsize + sizeof (ndr_wchar_t);
256     mlen = sizeof (ndr_vcstr_t) + vc->wsize + sizeof (smb_wchar_t);

257     vc->vcs = ndr_heap_malloc(heap, mlen);

258     if (vc->vcs) {
259         vc->vcs->vc_first_is = 0;
260         vc->vcs->vc_length_is = slen;
261         (void) ndr__mbstowcs(vc->vcs->buffer, s, slen + 1);
262         vc->vcs->vc_length_is = vc->wclen / sizeof (smb_wchar_t);
263         (void) smb__mbstowcs((smb_wchar_t *)vc->vcs->buffer, s,
264                             vc->vcs->vc_length_is);
265     }
266 }
267
268     unchanged portion omitted
269
270 /*
271  * Removed ndr_heap_siddup(), now using ndr_heap_dupmem().
272  * Duplicate a SID in the heap.
273  */
274 int
275 ndr_heap_siddup(ndr_heap_t *heap, smb_sid_t *sid)
276 {
277     smb_sid_t *new_sid;
278     unsigned size;

279     if (sid == NULL)
280         return (NULL);

281     size = smb_sid_len(sid);

282     if ((new_sid = ndr_heap_malloc(heap, size)) == NULL)
283         return (NULL);

284     bcopy(sid, new_sid, size);
285     return (new_sid);
286 }

287 int
288 ndr_heap_used(ndr_heap_t *heap)
289 {
290     int used = 0;
291     int i;

292     for (i = 0; i < NDR_HEAP_MAXIOV; ++i)
293         used += heap->iovec[i].iov_len;

294     return (used);
295 }
296
297     unchanged portion omitted

```

new/usr/src/lib/libmlrpc/common/ndr_marshall.c

1

```
*****
15908 Sun Mar 18 01:13:16 2018
new/usr/src/lib/libmlrpc/common/ndr_marshall.c
1575 untangle libmlrpc .. (libmlrpc)
*****
1 /*
2  * CDDL HEADER START
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11 * and limitations under the License.
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14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright (c) 2007, 2010, Oracle and/or its affiliates. All rights reserved.
23 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
24 */

26 #include <assert.h>
27 #include <strings.h>
28 #include <sys/param.h>

30 #include <libmlrpc.h>
29 #include <smbsrv/lib smb.h>
30 #include <smbsrv/libmlrpc.h>

32 #ifdef _BIG_ENDIAN
33 static const int ndr_native_byte_order = NDR_REPLAB_INTG_BIG_ENDIAN;
34 #else
35 static const int ndr_native_byte_order = NDR_REPLAB_INTG_LITTLE_ENDIAN;
36 #endif

38 static int ndr_decode_hdr_common(ndr_stream_t *, ndr_common_header_t *);
39 static int ndr_decode_pac_hdr(ndr_stream_t *, ndr_pac_hdr_t *);

41 static int
42 ndr_encode_decode_common(ndr_stream_t *nds, unsigned opnum,
43 ndr_typeinfo_t *ti, void *datum)
44 {
45     int rc;

47     /*
48      * Perform the (un)marshalling
49      */
50     if (ndo_operation(nds, ti, opnum, datum))
51         return (NDR_DRC_OK);

53     switch (nds->error) {
54     case NDR_ERR_MALLOCF_FAILED:
55         rc = NDR_DRC_FAULT_OUT_OF_MEMORY;
56         break;

58     case NDR_ERR_SWITCH_VALUE_INVALID:
59         rc = NDR_DRC_FAULT_PARAM_0_INVALID;
```

new/usr/src/lib/libmlrpc/common/ndr_marshall.c

2

```
60         break;

62     case NDR_ERR_UNDERFLOW:
63         rc = NDR_DRC_FAULT_RECEIVED_RUNT;
64         break;

66     case NDR_ERR_GROW_FAILED:
67         rc = NDR_DRC_FAULT_ENCODE_TOO_BIG;
68         break;

70     default:
71         if (nds->m_op == NDR_M_OP_MARSHALL)
72             rc = NDR_DRC_FAULT_ENCODE_FAILED;
73         else
74             rc = NDR_DRC_FAULT_DECODE_FAILED;
75         break;
76     }

78     return (rc);
79 }
_____unchanged_portion_omitted_____
```

```

*****
12982 Sun Mar 18 01:13:16 2018
new/usr/src/lib/libmlrpc/common/ndr_ops.c
1575 untangle libmlrpc .. (libmlrpc)
*****
1 /*
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14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23 * Copyright (c) 2008, 2010, Oracle and/or its affiliates. All rights reserved.
24 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
25 */

27 /*
28 * Server-side NDR stream (PDU) operations. Stream operations should
29 * return TRUE (non-zero) on success or FALSE (zero or a null pointer)
30 * on failure. When an operation returns FALSE, including ndr_malloc()
31 * returning NULL, it should set the nds->error to indicate what went
32 * wrong.
33 *
34 * When available, the relevant ndr reference is passed to the
35 * operation but keep in mind that it may be a null pointer.
36 *
37 * Functions ndr_get_pdu(), ndr_put_pdu(), and ndr_pad_pdu()
38 * must never grow the PDU data. A request for out-of-bounds data is
39 * an error. The swap_bytes flag is 1 if NDR knows that the byte-
40 * order in the PDU is different from the local system.
41 */

43 #include <sys/types.h>
44 #include <stdarg.h>
45 #include <ctype.h>
46 #include <stdio.h>
47 #include <stdlib.h>
48 #include <strings.h>
49 #include <string.h>
50 #include <assert.h>

52 #include <libmlrpc.h>
52 #include <smbsrv/lib smb.h>
53 #include <smbsrv/libmlrpc.h>

54 #define NDOBUFSZ                128

56 #define NDR_PDU_BLOCK_SIZE      (4*1024)
57 #define NDR_PDU_BLOCK_MASK     (NDR_PDU_BLOCK_SIZE - 1)
58 #define NDR_PDU_ALIGN(N) \
59     (((N) + NDR_PDU_BLOCK_SIZE) & ~NDR_PDU_BLOCK_MASK)

```

```

60 #define NDR_PDU_MAX_SIZE      (64*1024*1024)

62 static char *ndo_malloc(ndr_stream_t *, unsigned, ndr_ref_t *);
63 static int ndr_free(ndr_stream_t *, char *, ndr_ref_t *);
64 static int ndr_grow_pdu(ndr_stream_t *, unsigned long, ndr_ref_t *);
65 static int ndr_pad_pdu(ndr_stream_t *, unsigned long, unsigned long,
66     ndr_ref_t *);
67 static int ndr_get_pdu(ndr_stream_t *, unsigned long, unsigned long,
68     char *, int, ndr_ref_t *);
69 static int ndr_put_pdu(ndr_stream_t *, unsigned long, unsigned long,
70     char *, int, ndr_ref_t *);
71 static void ndr_tattle(ndr_stream_t *, char *, ndr_ref_t *);
72 static void ndr_tattle_error(ndr_stream_t *, ndr_ref_t *);
73 static int ndr_reset(ndr_stream_t *);
74 static void ndr_destruct(ndr_stream_t *);
75 static void ndr_hexfmt(uint8_t *, int, int, char *, int);

77 /*
78  * The ndr stream operations table.
79  */
80 static ndr_stream_ops_t nds_ops = {
81     ndr_malloc,
82     ndr_free,
83     ndr_grow_pdu,
84     ndr_pad_pdu,
85     ndr_get_pdu,
86     ndr_put_pdu,
87     ndr_tattle,
88     ndr_tattle_error,
89     ndr_reset,
90     ndr_destruct
91 };

```

_____unchanged_portion_omitted_____

```

*****
54673 Sun Mar 18 01:13:16 2018
new/usr/src/lib/libmlrpc/common/ndr_process.c
1575 untangle libmlrpc .. (libmlrpc)
*****
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16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright 2010 Sun Microsystems, Inc. All rights reserved.
23 * Use is subject to license terms.
24 * Copyright 2012 Milan Jurik. All rights reserved.
25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */
27
28 /*
29 * Network Data Representation (NDR) is a compatible subset of the DCE RPC
30 * and MSRPC NDR. NDR is used to move parameters consisting of
31 * complicated trees of data constructs between an RPC client and server.
32 */
33
34 #include <sys/byteorder.h>
35 #include <strings.h>
36 #include <assert.h>
37 #include <string.h>
38 #include <stdio.h>
39 #include <stdlib.h>
40
41 #include <libmlrpc.h>
42 #include <ndr_wchar.h>
43 #include <smbsrv/libmb.h>
44 #include <smbsrv/string.h>
45 #include <smbsrv/libmlrpc.h>
46
47 #define NDR_STRING_MAX 4096
48
49 #define NDR_IS_UNION(T) \
50     (((T)->type_flags & NDR_F_TYPEOP_MASK) == NDR_F_UNION)
51 #define NDR_IS_STRING(T) \
52     (((T)->type_flags & NDR_F_TYPEOP_MASK) == NDR_F_STRING)
53
54 extern ndr_typeinfo_t ndr_s_wchar;
55
56 /*
57  * The following synopsis describes the terms TOP-MOST, OUTER and INNER.
58  *
59  * Each parameter (call arguments and return values) is a TOP-MOST item.
60  * A TOP-MOST item consists of one or more OUTER items. An OUTER item
61  * consists of one or more INNER items. There are important differences

```

```

57 * between each kind, which, primarily, have to do with the allocation
58 * of memory to contain data structures and the order of processing.
59 *
60 * This is most easily demonstrated with a short example.
61 * Consider these structures:
62 *
63 *     struct top_param {
64 *         long         level;
65 *         struct list * head;
66 *         long         count;
67 *     };
68 *
69 *     struct list {
70 *         struct list * next;
71 *         char *       str; // a string
72 *     };
73 *
74 * Now, consider an instance tree like this:
75 *
76 *     +-----+ +-----+ +-----+
77 *     |top_param| +---->|list #1| +---->|list #2|
78 *     +-----+ +-----+ +-----+
79 *     | level | | next | | next |
80 *     | head  | | str  | | str  |
81 *     | count | | flag | | flag |
82 *     +-----+ +-----+ +-----+
83 *
84 * The DCE(MS)/RPC Stub Data encoding for the tree is the following.
85 * The vertical bars (|) indicate OUTER construct boundaries.
86 *
87 *     +-----+-----+-----+-----+-----+-----+-----+
88 *     |level|#1.next|#1.str|#1.flag|#2.next|#2.str|#2.flag|"bar"|"foo"|count|
89 *     +-----+-----+-----+-----+-----+-----+-----+
90 *     level |<----- head ----->|count
91 *     TOP   TOP
92 *
93 * Here's what to notice:
94 *
95 * - The members of the TOP-MOST construct are scattered through the Stub
96 *   Data in the order they occur. This example shows a TOP-MOST construct
97 *   consisting of atomic types (pointers and integers). A construct
98 *   (struct) within the TOP-MOST construct would be contiguous and not
99 *   scattered.
100 *
101 * - The members of OUTER constructs are contiguous, which allows for
102 *   non-copied relocated (fixed-up) data structures at the packet's
103 *   destination. We don't do fix-ups here. The pointers within the
104 *   OUTER constructs are processed depth-first in the order that they
105 *   occur. If they were processed breadth first, the sequence would
106 *   be #1,"foo",#2,"bar". This is tricky because OUTER constructs may
107 *   be variable length, and pointers are often encountered before the
108 *   size(s) is known.
109 *
110 * - The INNER constructs are simply the members of an OUTER construct.
111 *
112 * For comparison, consider how ONC RPC would handle the same tree of
113 * data. ONC requires very little buffering, while DCE requires enough
114 * buffer space for the entire message. ONC does atom-by-atom depth-first
115 * (de)serialization and copy, while DCE allows for constructs to be
116 * "fixed-up" (relocated) in place at the destination. The packet data
117 * for the same tree processed by ONC RPC would look like this:
118 *
119 *     +-----+-----+-----+-----+-----+-----+-----+
120 *     |level|#1.next|#2.next|#2.str|"bar"|#2.flag|#1.str|"foo"|#1.flag|count|
121 *     +-----+-----+-----+-----+-----+-----+-----+
122 *     TOP   #1   #2   #2   bar   #2   #1   foo   #1   TOP

```



```

123 *
124 * More details about each TOP-MOST, OUTER, and INNER constructs appear
125 * throughout this source file near where such constructs are processed.
126 *
127 * NDR_REFERENCE
128 *
129 * The primary object for NDR is the ndr_ref_t.
130 *
131 * An ndr reference indicates the local datum (i.e. native "C" data
132 * format), and the element within the Stub Data (contained within the
133 * RPC PDU (protocol data unit). An ndr reference also indicates,
134 * largely as a debugging aid, something about the type of the
135 * element/datum, and the enclosing construct for the element. The
136 * ndr reference's are typically allocated on the stack as locals,
137 * and the chain of ndr-reference.enclosing references is in reverse
138 * order of the call graph.
139 *
140 * The ndr-reference.datum is a pointer to the local memory that
141 * contains/receives the value. The ndr-reference.pdu_offset indicates
142 * where in the Stub Data the value is to be stored/retrieved.
143 *
144 * The ndr-reference also contains various parameters to the NDR
145 * process, such as ndr-reference.size_is, which indicates the size
146 * of variable length data, or ndr-reference.switch_is, which
147 * indicates the arm of a union to use.
148 *
149 * QUEUE OF OUTER REFERENCES
150 *
151 * Some OUTER constructs are variable size. Sometimes (often) we don't
152 * know the size of the OUTER construct until after pointers have been
153 * encountered. Hence, we can not begin processing the referent of the
154 * pointer until after the referring OUTER construct is completely
155 * processed, i.e. we don't know where to find/put the referent in the
156 * Stub Data until we know the size of all its predecessors.
157 *
158 * This is managed using the queue of OUTER references. The queue is
159 * anchored in ndr_stream.outer_queue_head. At any time,
160 * ndr_stream.outer_queue_tailp indicates where to put the
161 * ndr-reference for the next encountered pointer.
162 *
163 * Refer to the example above as we illustrate the queue here. In these
164 * illustrations, the queue entries are not the data structures themselves.
165 * Rather, they are ndr-reference entries which **refer** to the data
166 * structures in both the PDU and local memory.
167 *
168 * During some point in the processing, the queue looks like this:
169 *
170 *   outer_current -----v
171 *   outer_queue_head --> list#1 --0
172 *   outer_queue_tailp -----&
173 *
174 * When the pointer #1.next is encountered, and entry is added to the
175 * queue,
176 *
177 *   outer_current -----v
178 *   outer_queue_head --> list#1 --> list#2 --0
179 *   outer_queue_tailp -----&
180 *
181 * and the members of #1 continue to be processed, which encounters
182 * #1.str:
183 *
184 *   outer_current -----v
185 *   outer_queue_head --> list#1 --> list#2 --> "foo" --0
186 *   outer_queue_tailp -----&
187 *
188 * Upon the completion of list#1, the processing continues by moving to

```

```

189 * ndr_stream.outer_current->next, and the tail is set to this outer member:
190 *
191 *   outer_current -----v
192 *   outer_queue_head --> list#1 --> list#2 --> "foo" --0
193 *   outer_queue_tailp -----&
194 *
195 * Space for list#2 is allocated, either in the Stub Data or of local
196 * memory. When #2.next is encountered, it is found to be the null
197 * pointer and no reference is added to the queue. When #2.str is
198 * encountered, it is found to be valid, and a reference is added:
199 *
200 *   outer_current -----v
201 *   outer_queue_head --> list#1 --> list#2 --> "bar" --> "foo" --0
202 *   outer_queue_tailp -----&
203 *
204 * Processing continues in a similar fashion with the string "bar",
205 * which is variable-length. At this point, memory for "bar" may be
206 * malloc()ed during NDR_M_OP_UNMARSHALL:
207 *
208 *   outer_current -----v
209 *   outer_queue_head --> list#1 --> list#2 --> "bar" --> "foo" --0
210 *   outer_queue_tailp -----&
211 *
212 * And finishes on string "foo". Notice that because "bar" is a
213 * variable length string, and we don't know the PDU offset for "foo"
214 * until we reach this point.
215 *
216 * When the queue is drained (current->next==0), processing continues
217 * with the next TOP-MOST member.
218 *
219 * The queue of OUTER constructs manages the variable-length semantics
220 * of OUTER constructs and satisfies the depth-first requirement.
221 * We allow the queue to linger until the entire TOP-MOST structure is
222 * processed as an aid to debugging.
223 */
224
225 static ndr_ref_t *ndr_enter_outer_queue(ndr_ref_t *);
226 extern int ndr_ulong(ndr_ref_t *);
227
228 /*
229 * TOP-MOST ELEMENTS
230 *
231 * This is fundamentally the first OUTER construct of the parameter,
232 * possibly followed by more OUTER constructs due to pointers. The
233 * datum (local memory) for TOP-MOST constructs (structs) is allocated
234 * by the caller of NDR.
235 *
236 * After the element is transferred, the outer_queue is drained.
237 *
238 * All we have to do is add an entry to the outer_queue for this
239 * top-most member, and commence the outer_queue processing.
240 */
241 int
242 ndr_process(ndr_stream_t *nds, ndr_typeinfo_t *ti, char *datum)
243 {
244     ndr_ref_t     myref;
245
246     bzero(&myref, sizeof (myref));
247     myref.stream = nds;
248     myref.datum = datum;
249     myref.name = "PROCESS";
250     myref.ti = ti;
251
252     return (ndr_topmost(&myref));
253 }

```

unchanged portion omitted

```

1160 int
1161 ndr_outer_string(ndr_ref_t *outer_ref)
1162 {
1163     ndr_stream_t *nds = outer_ref->stream;
1164     ndr_typeinfo_t *ti = outer_ref->ti;
1165     ndr_ref_t myref;
1166     char *valp = NULL;
1167     unsigned is_varlen = ti->pdu_size_variable_part;
1168     int is_union = NDR_IS_UNION(ti);
1169     int is_string = NDR_IS_STRING(ti);
1170     int rc;
1171     unsigned n_zeroes;
1172     unsigned ix;
1173     unsigned long size_is;
1174     unsigned long first_is;
1175     unsigned long length_is;
1176     unsigned n_hdr;
1177     unsigned n_fixed;
1178     unsigned n_variable;
1179     unsigned n_alloc;
1180     unsigned n_pdu_total;
1181     int params;

1183     params = outer_ref->outer_flags & NDR_F_PARAMS_MASK;

1185     assert(is_varlen && is_string && !is_union);
1186     assert(params == NDR_F_NONE);

1188     /* string header for this: size_is first_is length_is */
1189     n_hdr = 12;

1191     /* fixed part -- exactly none of these */
1192     n_fixed = 0;

1194     if (!ndr_outer_grow(outer_ref, n_hdr))
1195         return (0); /* error already set */

1197     switch (nds->m_op) {
1198     case NDR_M_OP_MARSHALL:
1199         valp = outer_ref->datum;
1200         if (!valp) {
1201             NDR_SET_ERROR(outer_ref, NDR_ERR_OUTER_PARAMS_BAD);
1202             return (0);
1203         }

1205         if (outer_ref->backptr)
1206             assert(valp == *outer_ref->backptr);

1208         if (ti == &ndt_s_wchar) {
1209             /*
1210              * size_is is the number of characters in the
1211              * (multibyte) string, including the null.
1212              * In other words, symbols, not bytes.
1213              */
1214             size_t wlen;
1215             wlen = ndr_mbstowcs(NULL, valp, NDR_STRING_MAX);
1216             if (wlen == (size_t)-1) {
1217                 /* illegal sequence error? */
1218                 size_is = smb_wcequiv_strlen(valp) /
1219                     sizeof (smb_wchar_t);

1217                 if (!(nds->flags & NDS_F_NONULL))
1218                     ++size_is;

1220                 if (size_is > NDR_STRING_MAX) {

```

```

1218             NDR_SET_ERROR(outer_ref, NDR_ERR_STRLLEN);
1219             return (0);
1220         }
1221         if ((nds->flags & NDS_F_NONULL) == 0)
1222             wlen++;
1223         if (wlen > NDR_STRING_MAX) {
1224             NDR_SET_ERROR(outer_ref, NDR_ERR_STRLLEN);
1225             return (0);
1226         }
1227         size_is = wlen;
1228     } else {
1229         valp = outer_ref->datum;
1230         n_zeroes = 0;
1231         for (ix = 0; ix < NDR_STRING_MAX; ix++) {
1232             if (valp[ix] == 0) {
1233                 n_zeroes++;
1234                 if (n_zeroes >= is_varlen &&
1235                     ix % is_varlen == 0) {
1236                     break;
1237                 }
1238             } else {
1239                 n_zeroes = 0;
1240             }
1241         }
1242         if (ix >= NDR_STRING_MAX) {
1243             NDR_SET_ERROR(outer_ref, NDR_ERR_STRLLEN);
1244             return (0);
1245         }
1246         size_is = ix+1;
1247     }

1249     first_is = 0;

1251     if (nds->flags & NDS_F_NOTERM)
1252         length_is = size_is - 1;
1253     else
1254         length_is = size_is;

1256     if (!ndr_outer_poke_sizing(outer_ref, 0, &size_is) ||
1257         !ndr_outer_poke_sizing(outer_ref, 4, &first_is) ||
1258         !ndr_outer_poke_sizing(outer_ref, 8, &length_is))
1259         return (0); /* error already set */
1260     break;

1262     case NDR_M_OP_UNMARSHALL:
1263         if (!ndr_outer_peek_sizing(outer_ref, 0, &size_is) ||
1264             !ndr_outer_peek_sizing(outer_ref, 4, &first_is) ||
1265             !ndr_outer_peek_sizing(outer_ref, 8, &length_is))
1266             return (0); /* error already set */

1268     /*
1269     * In addition to the first_is check, we used to check that
1270     * size_is or size_is-1 was equal to length_is but Windows95
1271     * doesn't conform to this "rule" (see variable part below).
1272     * The srvmgr tool for Windows95 sent the following values
1273     * for a path string:
1274     *
1275     *     size_is = 261 (0x105)
1276     *     first_is = 0
1277     *     length_is = 53 (0x35)
1278     *
1279     * The length_is was correct (for the given path) but the
1280     * size_is was the maximum path length rather than being
1281     * related to length_is.
1282     */
1283     if (first_is != 0) {

```

```

1284         NDR_SET_ERROR(outer_ref, NDR_ERR_STRING_SIZING);
1285         return (0);
1286     }

1288     if (ti == &ndt_s_wchar) {
1289         /*
1290          * Decoding Unicode to UTF-8; we need to allow
1291          * for the maximum possible char size. It would
1292          * be nice to use mbequiv_strlen but the string
1293          * may not be null terminated.
1294          */
1295         n_alloc = (size_is + 1) * NDR_MB_CHAR_MAX;
1296         n_alloc = (size_is + 1) * MTS_MB_CHAR_MAX;
1297     } else {
1298         n_alloc = (size_is + 1) * is_varlen;
1299     }

1300     valp = NDS_MALLOC(nds, n_alloc, outer_ref);
1301     if (!valp) {
1302         NDR_SET_ERROR(outer_ref, NDR_ERR_MALLOC_FAILED);
1303         return (0);
1304     }

1306     bzero(valp, (size_is+1) * is_varlen);

1308     if (outer_ref->backptr)
1309         *outer_ref->backptr = valp;
1310     outer_ref->datum = valp;
1311     break;

1313     default:
1314         NDR_SET_ERROR(outer_ref, NDR_ERR_M_OP_INVALID);
1315         return (0);
1316 }

1318 /*
1319  * Variable part - exactly length_is of these.
1320  *
1321  * Usually, length_is is same as size_is and includes nul.
1322  * Some protocols use length_is = size_is-1, and length_is does
1323  * not include the nul (which is more consistent with DCE spec).
1324  * If the length_is is 0, there is no data following the
1325  * sizing header, regardless of size_is.
1326  */
1327 n_variable = length_is * is_varlen;

1329 /* sum them up to determine the PDU space required */
1330 n_pdu_total = n_hdr + n_fixed + n_variable;

1332 /* similar sum to determine how much local memory is required */
1333 n_alloc = n_fixed + n_variable;

1335 rc = ndr_outer_grow(outer_ref, n_pdu_total);
1336 if (!rc)
1337     return (rc);          /* error already set */

1339 if (length_is > 0) {
1340     bzero(&myref, sizeof (myref));
1341     myref.stream = nds;
1342     myref.enclosing = outer_ref;
1343     myref.ti = outer_ref->ti;
1344     myref.datum = outer_ref->datum;
1345     myref.name = "OUTER-STRING";
1346     myref.outer_flags = NDR_F_IS_STRING;
1347     myref.inner_flags = NDR_F_NONE;

```

```

1349         /*
1350          * Set up size_is and strlen_is for ndr_s_wchar.
1351          */
1352         myref.size_is = size_is;
1353         myref.strlen_is = length_is;
1354     }

1356     myref.pdu_offset = outer_ref->pdu_offset + 12;

1358     /*
1359      * Don't try to decode empty strings.
1360      */
1361     if ((size_is == 0) && (first_is == 0) && (length_is == 0)) {
1362         nds->pdu_scan_offset = outer_ref->pdu_end_offset;
1363         return (1);
1364     }

1366     if ((size_is != 0) && (length_is != 0)) {
1367         rc = ndr_inner(&myref);
1368         if (!rc)
1369             return (rc);          /* error already set */
1370     }

1372     nds->pdu_scan_offset = outer_ref->pdu_end_offset;
1373     return (1);
1374 }
_____unchanged_portion_omitted_____

1720 int
1721 ndr_inner_array(ndr_ref_t *encl_ref)
1722 {
1723     ndr_typeinfo_t      *ti = encl_ref->ti;
1724     ndr_ref_t           myref;
1725     unsigned long       pdu_offset = encl_ref->pdu_offset;
1726     unsigned long       n_elem;
1727     unsigned long       i;
1728     char                 name[30];

1730     if (encl_ref->inner_flags & NDR_F_SIZE_IS) {
1731         /* now is the time to check/set size */
1732         if (!ndr_size_is(encl_ref))
1733             return (0);          /* error already set */
1734         n_elem = encl_ref->size_is;
1735     } else {
1736         assert(encl_ref->inner_flags & NDR_F_DIMENSION_IS);
1737         n_elem = encl_ref->dimension_is;
1738     }

1740     bzero(&myref, sizeof (myref));
1741     myref.enclosing = encl_ref;
1742     myref.stream = encl_ref->stream;
1743     myref.packed_alignment = 0;
1744     myref.ti = ti;
1745     myref.inner_flags = NDR_F_NONE;

1747     for (i = 0; i < n_elem; i++) {
1748         (void) snprintf(name, sizeof (name), "[%lu]", i);
1749         (void) sprintf(name, "[%lu]", i);
1750         myref.name = name;
1751         myref.pdu_offset = pdu_offset + i * ti->pdu_size_fixed_part;
1752         myref.datum = encl_ref->datum + i * ti->c_size_fixed_part;

1753         if (!ndr_inner(&myref))
1754             return (0);
1755     }

```

```

1757     return (1);
1758 }
    _____
    unchanged_portion_omitted_

1796 #define MAKE_BASIC_TYPE(TYPE, SIZE) \
1797     MAKE_BASIC_TYPE_BASE(TYPE, SIZE) \
1798     MAKE_BASIC_TYPE_STRING(TYPE, SIZE)

1800 int ndr_basic_integer(ndr_ref_t *, unsigned);
1801 int ndr_string_basic_integer(ndr_ref_t *, ndr_typeinfo_t *);

1803 /* Comments to be nice to those searching for these types. */
1804 MAKE_BASIC_TYPE(_char, 1) /* ndt__char, ndt_s_char */
1805 MAKE_BASIC_TYPE(_uchar, 1) /* ndt__uchar, ndt_s_uchar */
1806 MAKE_BASIC_TYPE(_short, 2) /* ndt__short, ndt_s_short */
1807 MAKE_BASIC_TYPE(_ushort, 2) /* ndt__ushort, ndt_s_ushort */
1808 MAKE_BASIC_TYPE(_long, 4) /* ndt__long, ndt_s_long */
1809 MAKE_BASIC_TYPE(_ulong, 4) /* ndt__ulong, ndt_s_ulong */

1811 MAKE_BASIC_TYPE_BASE(_wchar, 2) /* ndt__wchar, ndt_s_wchar */
1800 MAKE_BASIC_TYPE(_char, 1)
1801 MAKE_BASIC_TYPE(_uchar, 1)
1802 MAKE_BASIC_TYPE(_short, 2)
1803 MAKE_BASIC_TYPE(_ushort, 2)
1804 MAKE_BASIC_TYPE(_long, 4)
1805 MAKE_BASIC_TYPE(_ulong, 4)

1807 MAKE_BASIC_TYPE_BASE(_wchar, 2)

1813 int
1814 ndr_basic_integer(ndr_ref_t *ref, unsigned size)
1815 {
1816     ndr_stream_t *nds = ref->stream;
1817     char *valp = (char *)ref->datum;
1818     int rc;

1820     switch (nds->m_op) {
1821     case NDR_M_OP_MARSHALL:
1822         rc = NDS_PUT_PDU(nds, ref->pdu_offset, size,
1823             valp, nds->swap, ref);
1824         break;

1826     case NDR_M_OP_UNMARSHALL:
1827         rc = NDS_GET_PDU(nds, ref->pdu_offset, size,
1828             valp, nds->swap, ref);
1829         break;

1831     default:
1832         NDR_SET_ERROR(ref, NDR_ERR_M_OP_INVALID);
1833         return (0);
1834     }

1836     return (rc);
1837 }

1839 int
1840 ndr_string_basic_integer(ndr_ref_t *encl_ref, ndr_typeinfo_t *type_under)
1841 {
1842     unsigned long pdu_offset = encl_ref->pdu_offset;
1843     unsigned size = type_under->pdu_size_fixed_part;
1844     char *valp;
1845     ndr_ref_t myref;
1846     unsigned long i;
1847     long sense = 0;
1848     char name[30];

```

```

1850     assert(size != 0);

1852     bzero(&myref, sizeof(myref));
1853     myref.enclosing = encl_ref;
1854     myref.stream = encl_ref->stream;
1855     myref.packed_alignment = 0;
1856     myref.ti = type_under;
1857     myref.inner_flags = NDR_F_NONE;
1858     myref.name = name;

1860     for (i = 0; i < NDR_STRING_MAX; i++) {
1861         (void) snprintf(name, sizeof(name), "[%lu]", i);
1862         (void) sprintf(name, "[%lu]", i);
1863         myref.pdu_offset = pdu_offset + i * size;
1864         valp = encl_ref->datum + i * size;
1865         myref.datum = valp;

1866         if (!ndr_inner(&myref))
1867             return (0);

1869         switch (size) {
1870         case 1:         sense = *valp; break;
1871             /*LINTED E_BAD_PTR_CAST_ALIGN*/
1872         case 2:         sense = *(short *)valp; break;
1873             /*LINTED E_BAD_PTR_CAST_ALIGN*/
1874         case 4:         sense = *(long *)valp; break;
1875         }

1877         if (!sense)
1878             break;
1879     }

1881     return (1);
1882 }
    _____
    unchanged_portion_omitted_

1898 /*
1899  * Hand coded wchar function because all strings are transported
1900  * as wide characters. During NDR_M_OP_MARSHALL, we convert from
1901  * multi-byte to wide characters. During NDR_M_OP_UNMARSHALL, we
1902  * convert from wide characters to multi-byte.
1903  *
1904  * The most critical thing to get right in this function is to
1905  * marshal or unmarshal exactly the number of elements the
1906  * OtW length specifies, as saved by the caller in: strlen_is.
1907  * Doing otherwise would leave us positioned at the wrong place
1908  * in the data stream for whatever follows this. Note that the
1909  * string data covered by strlen_is may or may not include any
1910  * null termination, but the converted string provided by the
1911  * caller or returned always has a null terminator.
1912  * It appeared that NT would sometimes leave a spurious character
1913  * in the data stream before the null wide_char, which would get
1914  * included in the string decode because we processed until the
1915  * null character. It now looks like NT does not always terminate
1916  * RPC Unicode strings and the terminating null is a side effect
1917  * of field alignment. So now we rely on the strlen_is (set up in
1918  * ndr_outer_string) of the enclosing reference. This may or may
1919  * not include the null but it doesn't matter, the algorithm will
1920  * get it right.
1921  */
1912 int
1913 ndr_s_wchar(ndr_ref_t *encl_ref)
1914 {
1915     ndr_stream_t *nds = encl_ref->stream;
1916     char *valp = encl_ref->datum;

```

```

1914 unsigned short wide_char;
1915 char *valp;
1918 ndr_ref_t myref;
1917 unsigned long i;
1919 char name[30];
1920 ndr_wchar_t wcs[NDR_STRING_MAX+1];
1921 size_t i, slen, wlen;
1919 int count;
1920 int char_count = 0;

1923 /* This is enforced in ndr_outer_string() */
1924 assert(encl_ref->strlen_is <= NDR_STRING_MAX);

1926 if (nds->m_op == NDR_M_OP_UNMARSHALL) {
1927     /*
1928     * To avoid problems with zero length strings
1929     * we can just null terminate here and be done.
1930     */
1931     if (encl_ref->strlen_is == 0) {
1932         encl_ref->datum[0] = '\0';
1933         return (1);
1934     }
1935 }

1937 /*
1938 * If we're marshalling, convert the given string
1939 * from UTF-8 into a local UCS-2 string.
1940 */
1941 if (nds->m_op == NDR_M_OP_MARSHALL) {
1942     wlen = ndr_mbstowcs(wcs, valp, NDR_STRING_MAX);
1943     if (wlen == (size_t)-1)
1944         return (0);
1945     /*
1946     * Add a nulls to make strlen_is.
1947     * (always zero or one of them)
1948     * Then null terminate at wlen,
1949     * just for debug convenience.
1950     */
1951     while (wlen < encl_ref->strlen_is)
1952         wcs[wlen++] = 0;
1953     wcs[wlen] = 0;
1954 }

1956 /*
1957 * Copy wire data to or from the local wc string.
1958 * Always exactly strlen_is elements.
1959 */
1960 bzero(&myref, sizeof (myref));
1961 myref.enclosing = encl_ref;
1962 myref.stream = encl_ref->stream;
1963 myref.packed_alignment = 0;
1964 myref.ti = &ndt_wchar;
1965 myref.inner_flags = NDR_F_NONE;
1966 myref.datum = (char *)&wide_char;
1967 myref.name = name;
1968 myref.pdu_offset = encl_ref->pdu_offset;
1969 myref.datum = (char *)wcs;
1970 wlen = encl_ref->strlen_is;

1971 for (i = 0; i < wlen; i++) {
1972     (void) snprintf(name, sizeof (name), "[%lu]", i);
1973     if (!ndr_inner(&myref))
1974         valp = encl_ref->datum;
1975     count = 0;

1976 for (i = 0; i < NDR_STRING_MAX; i++) {

```

```

1947     (void) sprintf(name, "[%lu]", i);

1949     if (nds->m_op == NDR_M_OP_MARSHALL) {
1950         count = smb_mbtowc((smb_wchar_t *)&wide_char, valp,
1951             MTS_MB_CHAR_MAX);
1952         if (count < 0) {
1953             return (0);
1954         }
1955         myref.pdu_offset += sizeof (ndr_wchar_t);
1956         myref.datum += sizeof (ndr_wchar_t);
1957     }
1958     } else if (count == 0) {
1959         if (encl_ref->strlen_is != encl_ref->size_is)
1960             break;
1961     }

1962 /*
1963 * If this is unmarshall, convert the local UCS-2 string
1964 * into a UTF-8 string in the caller's buffer. The caller
1965 * previously determined the space required and provides a
1966 * buffer of sufficient size.
1967 * If the input char is 0, mbtowc
1968 * returns 0 without setting wide_char.
1969 * Set wide_char to 0 and a count of 1.
1970 */
1971 if (nds->m_op == NDR_M_OP_UNMARSHALL) {
1972     wcs[wlen] = 0;
1973     slen = ndr_wcstombs(valp, wcs, wlen);
1974     if (slen == (size_t)-1)
1975         wide_char = *valp;
1976         count = 1;
1977     }
1978 }

1979 if (!ndr_inner(&myref))
1980     return (0);
1981 valp[slen] = '\0';

1982 if (nds->m_op == NDR_M_OP_UNMARSHALL) {
1983     count = smb_wctomb(valp, wide_char);

1984     if ((++char_count) == encl_ref->strlen_is) {
1985         valp += count;
1986         *valp = '\0';
1987         break;
1988     }
1989 }

1990 if (!wide_char)
1991     break;

1992 myref.pdu_offset += sizeof (wide_char);
1993 valp += count;

1994 return (1);
1995 }

1996 /*
1997 * Converts a multibyte character string to a little-endian, wide-char
1998 * string. No more than nwchars wide characters are stored.
1999 * A terminating null wide character is appended if there is room.
2000 *
2001 * Returns the number of wide characters converted, not counting
2002 * any terminating null wide character. Returns -1 if an invalid
2003 * multibyte character is encountered.
2004 */
2005 /* ARGSUSED */

```

```

2006 size_t
2007 ndr_mbstowcs(ndr_stream_t *nds, ndr_wchar_t *wcs, const char *mbs,
2008 ndr_mbstowcs(ndr_stream_t *nds, smb_wchar_t *wcs, const char *mbs,
2009 size_t nwchars)
2010 {
2011     size_t len;
2012     smb_wchar_t *start = wcs;
2013     int nbytes;
2014
2015     while (nwchars--) {
2016         nbytes = ndr_mbtowc(nds, wcs, mbs, MTS_MB_CHAR_MAX);
2017         if (nbytes < 0) {
2018             *wcs = 0;
2019             return ((size_t)-1);
2020         }
2021
2022         if (*mbs == 0)
2023             break;
2024
2025         ++wcs;
2026         mbs += nbytes;
2027     }
2028
2029     return (wcs - start);
2030 }
2031
2032 /*
2033 * Converts a multibyte character to a little-endian, wide-char, which
2034 * is stored in wcharp. Up to nbytes bytes are examined.
2035 * If mbchar is valid, returns the number of bytes processed in mbchar.
2036 * If mbchar is invalid, returns -1. See also smb_mbtowc().
2037 */
2038 /*ARGSUSED*/
2039 int
2040 ndr_mbtowc(ndr_stream_t *nds, smb_wchar_t *wcharp, const char *mbchar,
2041 size_t nbytes)
2042 {
2043     int rc;
2044
2045     if ((rc = smb_mbtowc(wcharp, mbchar, nbytes)) < 0)
2046         return (rc);
2047
2048 #ifdef _BIG_ENDIAN
2049     if (nds == NULL || NDR_MODE_MATCH(nds, NDR_MODE_RETURN_SEND)) {
2050         /* Make WC string in LE order. */
2051         len = ndr_mbstowcs_le(wcs, mbs, nwchars);
2052     } else
2053     if (nds == NULL || NDR_MODE_MATCH(nds, NDR_MODE_RETURN_SEND))
2054         *wcharp = BSWAP_16(*wcharp);
2055 #endif
2056     len = ndr_mbstowcs(wcs, mbs, nwchars);
2057
2058     return (len);
2059 }
2060
2061 return (rc);
2062 }
2063
2064 _____unchanged_portion_omitted_____

```

```

*****
20962 Sun Mar 18 01:13:17 2018
new/usr/src/lib/libmlrpc/common/ndr_server.c
1575 untangle libmlrpc .. (libmlrpc)
*****
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18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright (c) 2007, 2010, Oracle and/or its affiliates. All rights reserved.
23 * Copyright 2015 Nexenta Systems, Inc. All rights reserved.
24 */

26 /*
27  * Server side RPC handler.
28  */

30 #include <sys/byteorder.h>
31 #include <sys/uio.h>
32 #include <errno.h>
33 #include <synch.h>
34 #include <stdlib.h>
35 #include <strings.h>
36 #include <string.h>
37 #include <thread.h>

39 #include <libmlrpc.h>
39 #include <smbsrv/lib smb.h>
40 #include <smbsrv/libmlrpc.h>
41 #include <smbsrv/ntaccess.h>

41 #define NDR_PIPE_SEND(np, buf, len) \
42     ((np)->np_send)((np), (buf), (len))
43 #define NDR_PIPE_RECV(np, buf, len) \
44     ((np)->np_recv)((np), (buf), (len))

46 static int ndr_svc_process(ndr_xa_t *);
47 static int ndr_svc_bind(ndr_xa_t *);
48 static int ndr_svc_request(ndr_xa_t *);
49 static void ndr_reply_prepare_hdr(ndr_xa_t *);
50 static int ndr_svc_alter_context(ndr_xa_t *);
51 static void ndr_reply_fault(ndr_xa_t *, unsigned long);

53 static int ndr_recv_request(ndr_xa_t *mxa);
54 static int ndr_recv_frag(ndr_xa_t *mxa);
55 static int ndr_send_reply(ndr_xa_t *);

57 static int ndr_pipe_process(ndr_pipe_t *, ndr_xa_t *);

```

```

59 /*
60  * External entry point called by smbd.
61  */
62 void
63 ndr_pipe_worker(ndr_pipe_t *np)
64 {
65     ndr_xa_t      *mxa;
66     int rc;

68     ndr_svc_binding_pool_init(&np->np_binding, np->np_binding_pool,
69                             NDR_N_BINDING_POOL);

71     if ((mxa = malloc(sizeof (*mxa))) == NULL)
72         return;

74     do {
75         bzero(mxa, sizeof (*mxa));
76         rc = ndr_pipe_process(np, mxa);
77     } while (rc == 0);

79     free(mxa);

81     /*
82      * Ensure that there are no RPC service policy handles
83      * (associated with this fid) left around.
84      */
85     ndr_hdclose(np);
86 }

unchanged_portion_omitted

134 /*
135  * Check whether or not the specified user has administrator privileges,
136  * i.e. is a member of Domain Admins or Administrators.
137  * Returns true if the user is an administrator, otherwise returns false.
138  */
139 boolean_t
140 ndr_is_admin(ndr_xa_t *xa)
141 {
142     smb_netuserinfo_t *ctx = xa->pipe->np_user;

144     return (ctx->ui_flags & SMB_ATF_ADMIN);
145 }

147 /*
148  * Check whether or not the specified user has power-user privileges,
149  * i.e. is a member of Domain Admins, Administrators or Power Users.
150  * This is typically required for operations such as managing shares.
151  * Returns true if the user is a power user, otherwise returns false.
152  */
153 boolean_t
154 ndr_is_poweruser(ndr_xa_t *xa)
155 {
156     smb_netuserinfo_t *ctx = xa->pipe->np_user;

158     return ((ctx->ui_flags & SMB_ATF_ADMIN) ||
159           (ctx->ui_flags & SMB_ATF_POWERUSER));
160 }

162 int32_t
163 ndr_native_os(ndr_xa_t *xa)
164 {
165     smb_netuserinfo_t *ctx = xa->pipe->np_user;

167     return (ctx->ui_native_os);
168 }

```

```
132 /*
133  * Receive an entire RPC request (all fragments)
134  * Returns zero or an NDR fault code.
135  */
136 static int
137 ndr_recv_request(ndr_xa_t *mxa)
138 {
139     ndr_common_header_t    *hdr = &mx->recv_hdr.common_hdr;
140     ndr_stream_t           *nds = &mx->recv_nds;
141     unsigned long          saved_size;
142     int                    rc;
143
144     rc = ndr_recv_frag(mxa);
145     if (rc != 0)
146         return (rc);
147     if (!NDR_IS_FIRST_FRAG(hdr->pfc_flags))
148         return (NDR_DRC_FAULT_DECODE_FAILED);
149
150     while (!NDR_IS_LAST_FRAG(hdr->pfc_flags)) {
151         rc = ndr_recv_frag(mxa);
152         if (rc != 0)
153             return (rc);
154     }
155     nds->pdu_scan_offset = 0;
156
157     /*
158      * This whacks nds->pdu_size, so save/restore.
159      * It leaves scan_offset after the header.
160      */
161     saved_size = nds->pdu_size;
162     rc = ndr_decode_pdu_hdr(mxa);
163     nds->pdu_size = saved_size;
164
165     return (rc);
166 }
167 unchanged_portion_omitted
```


new/usr/src/lib/libmlrpc/common/ndr_svc.c

1

```
*****
9380 Sun Mar 18 01:13:17 2018
new/usr/src/lib/libmlrpc/common/ndr_svc.c
1575 untangle libmlrpc .. (libmlrpc)
*****
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21 /*
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25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

28 #include <uuid/uuid.h>
29 #include <ctype.h>
30 #include <synch.h>
31 #include <stdio.h>
32 #include <unistd.h>
33 #include <string.h>
34 #include <strings.h>
35 #include <assert.h>

37 #include <libmlrpc.h>
37 #include <smbsrv/lib smb.h>
38 #include <smbsrv/libmlrpc.h>

40 /*
41 * Global list of allocated handles. Handles are used in various
42 * server-side RPC functions: typically, issued when a service is
43 * opened and obsoleted when it is closed. Clients should treat
44 * handles as opaque data.
45 */
46 static ndr_handle_t *ndr_handle_list;
47 static mutex_t ndr_handle_lock;

49 /*
50 * Table of registered services.
51 */
52 #define NDR_MAX_SERVICES 32
53 static ndr_service_t *ndr_services[NDR_MAX_SERVICES];

55 /*
56 * Register a service.
57 *
58 * Returns:
59 * 0 Success
```

new/usr/src/lib/libmlrpc/common/ndr_svc.c

2

```
60 * -1 Duplicate service
61 * -2 Duplicate name
62 * -3 Table overflow
63 */
64 int
65 ndr_svc_register(ndr_service_t *svc)
66 {
67     ndr_service_t *p;
68     int free_slot = -1;
69     int i;

71     for (i = 0; i < NDR_MAX_SERVICES; i++) {
72         if ((p = ndr_services[i]) == NULL) {
73             if (free_slot < 0)
74                 free_slot = i;
75             continue;
76         }

78         if (p == svc)
79             return (-1);

81         if (strcasecmp(p->name, svc->name) == 0)
82             return (-2);
83     }

85     if (free_slot < 0)
86         return (-3);

88     ndr_services[free_slot] = svc;
89     return (0);
90 }

unchanged_portion_omitted
```

```

*****
3720 Sun Mar 18 01:13:17 2018
new/usr/src/lib/libmlrpc/common/ndr_wchar.c
1575 untangle libmlrpc .. (libmlrpc)
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20 */

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26  * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
27  */

29 /*
30  * Some wchar support functions used by this library.
31  * Mostly just wrappers that call sys/u8_textprep.h
32  * functions: uconv_u8tou16, uconv_u16tou8.
33  */

35 #include <sys/types.h>
36 #include <sys/u8_textprep.h>
37 #include <string.h>

39 #include "ndr_wchar.h"

41 /*
42  * When we just want lengths, we need an output buffer to pass to the
43  * uconv... functions. Nothing ever reads this output, so we can
44  * use shared space for the unwanted output.
45  */
46 static uint16_t junk_wcs[NDR_STRING_MAX];
47 static char junk_mbs[NDR_MB_CUR_MAX * NDR_STRING_MAX];

49 static size_t
50 ndr_mbstowcs_x(uint16_t *, const char *, size_t, int);

52 /*
53  * Like mbstowcs(3C), but with UCS-2 wchar_t
54  */
55 size_t
56 ndr_mbstowcs(uint16_t *wcs, const char *mbs, size_t nwchars)
57 {
58     return (ndr_mbstowcs_x(wcs, mbs, nwchars,
59                             UCONV_OUT_SYSTEM_ENDIAN));
60 }

```

```

62 /*
63  * Like above, but put UCS-2 little-endian.
64  */
65 size_t
66 ndr_mbstowcs_le(uint16_t *wcs, const char *mbs, size_t nwchars)
67 {
68     return (ndr_mbstowcs_x(wcs, mbs, nwchars,
69                             UCONV_OUT_LITTLE_ENDIAN));
70 }

72 /*
73  * Like mbstowcs(3C), but with UCS-2 wchar_t, and
74  * one extra arg for the byte order flags.
75  */
76 static size_t
77 ndr_mbstowcs_x(uint16_t *wcs, const char *mbs, size_t nwchars, int flags)
78 {
79     size_t obytes, mbslen, wcslen;
80     int err;

82     /* NULL or empty input is allowed. */
83     if (mbs == NULL || *mbs == '\0') {
84         if (wcs != NULL && nwchars > 0)
85             *wcs = 0;
86         return (0);
87     }

89     /*
90      * If wcs == NULL, caller just wants the length.
91      * Convert into some throw-away space.
92      */
93     obytes = nwchars * 2;
94     if (wcs == NULL) {
95         if (obytes > sizeof (junk_wcs))
96             return ((size_t)-1);
97         wcs = junk_wcs;
98     }

100     mbslen = strlen(mbs);
101     wcslen = nwchars;
102     err = uconv_u8tou16((const uchar_t *)mbs, &mbslen,
103                         wcs, &wcslen, flags);
104     if (err != 0)
105         return ((size_t)-1);

107     if (wcslen < nwchars)
108         wcs[wcslen] = 0;

110     return (wcslen);
111 }

113 /*
114  * Like wcstombs(3C), but with UCS-2 wchar_t.
115  */
116 size_t
117 ndr_wcstombs(char *mbs, const uint16_t *wcs, size_t nbytes)
118 {
119     size_t mbslen, wcslen;
120     int err;

122     /* NULL or empty input is allowed. */
123     if (wcs == NULL || *wcs == 0) {
124         if (mbs != NULL && nbytes > 0)
125             *mbs = '\0';
126         return (0);
127     }

```

```
129     /*
130     * If mbs == NULL, caller just wants the length.
131     * Convert into some throw-away space.
132     */
133     if (mbs == NULL) {
134         if (nbytes > sizeof (junk_mbs))
135             return ((size_t)-1);
136         mbs = junk_mbs;
137     }
138
139     wcslen = ndr__wcslen(wcs);
140     mbslen = nbytes;
141     err = uconv_ul6tou8(wcs, &wcslen,
142         (uchar_t *)mbs, &mbslen, UCONV_IN_SYSTEM_ENDIAN);
143     if (err != 0)
144         return ((size_t)-1);
145
146     if (mbslen < nbytes)
147         mbs[mbslen] = '\0';
148
149     return (mbslen);
150 }
151
152 /*
153 * Like wcslen(3C), but with UCS-2 wchar_t.
154 */
155 size_t
156 ndr__wcslen(const uint16_t *wc)
157 {
158     size_t len = 0;
159     while (*wc++)
160         len++;
161     return (len);
162 }
```

new/usr/src/lib/libmlrpc/common/ndr_wchar.h

1

1412 Sun Mar 18 01:13:17 2018

new/usr/src/lib/libmlrpc/common/ndr_wchar.h

1575 untangle libmlrpc .. (libmlrpc)

```
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26  * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
27  */

29 #ifndef _NDR_WCHAR_H
30 #define _NDR_WCHAR_H

32 /*
33  * Some ndr_wchar_t support stuff.
34  */

36 #define NDR_MB_CUR_MAX          3
37 #define NDR_MB_CHAR_MAX        NDR_MB_CUR_MAX
38 #define NDR_STRING_MAX         4096

40 size_t ndr_mbstowcs(uint16_t *, const char *, size_t);
41 size_t ndr_mbstowcs_le(uint16_t *, const char *, size_t);

43 size_t ndr_wcslen(const uint16_t *);
44 size_t ndr_wcstombs(char *, const uint16_t *, size_t);

46 #endif /* _NDR_WCHAR_H */
```

```

*****
4456 Sun Mar 18 01:13:17 2018
new/usr/src/lib/libmlrpc/common/ndrtypes.ndl
1575 untangle libmlrpc .. (libmlrpc)
*****
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24 *
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26 */

28 #ifndef _NDRTYPES_NDL_
29 #define _NDRTYPES_NDL_
26 #ifndef _NDR_TYPES_NDL_
27 #define _NDR_TYPES_NDL_

31 /*
32 * Type definitions (and related) used in NDL files and the
33 * NDL run-time support libraries. See also: libmlrpc.h
34 */

36 #define TYPEINFO(TYPE) ndt_##TYPE

38 #ifdef NDRGEN

40 #define ALIGN(X) [align(X)]
41 #define OPERATION(X) [operation(X)]
42 #define IN [in]
43 #define OUT [out]
44 #define INOUT [in out]

46 #define STRING [string]
47 #define SIZE_IS(X) [size_is(X)]

49 #define SWITCH(X) [switch_is(X)]
50 #define CASE(X) [case(X)]
51 #define DEFAULT [default]

53 #define INTERFACE(X) [interface(X)]
54 #define UUID(X) [uuid(X)]

56 #define ARG_IS(X) [arg_is(X)]

58 #define REFERENCE [reference]
59 #define REF [reference]

```

```

60 #define UNIQUE [unique]
61 #define PTR [ptr]
62 #define POINTER_DEFAULT(X) [pointer_default(X)]

64 #define ANY_SIZE_ARRAY *

66 #define IMPORT_EXTERN [extern]

68 #define BYTE uchar
69 #define WORD ushort
70 #define DWORD ulong
71 #define ntstatus_t ulong

73 #define LPTSTR STRING wchar *

75 #define LPBYTE uchar *
76 #define LPWORD ushort *
77 #define LPDWORD ulong *

72 /*
73  * Opaque context handle.
74  */
75 #ifndef CONTEXT_HANDLE
76 #define CONTEXT_HANDLE(NAME) \
77     struct NAME { \
78         DWORD data1; \
79         DWORD data2; \
80         WORD data3[2]; \
81         BYTE data4[8]; \
82     };
83     typedef struct NAME
84 #endif /* CONTEXT_HANDLE */

79 #define EXTERNTYPEINFO(TYPE)

81 #else /* NDRGEN */

83 #define ALIGN(X)
84 #define OPERATION(X)
85 #define IN
86 #define OUT
87 #define INOUT

89 #define STRING
90 #define SIZE_IS(X)

92 #define SWITCH(X)
93 #define CASE(X)
94 #define DEFAULT

96 #define INTERFACE(X)
97 #define UUID(X)

99 #define ARG_IS(X)

101 #define REFERENCE
102 #define REF
103 #define UNIQUE
104 #define PTR
105 #define POINTER_DEFAULT(X)

107 #define IMPORT_EXTERN

109 /*
110  * When not using ndrgen, get BYTE, WORD, DWORD definitions from wintypes.h.
111  */

```

```

112 #include <smb/wintypes.h>
119 #include <smb/srv/wintypes.h>

114 #define EXTERNTYPEINFO(TYPE)    extern struct ndr_typeinfo TYPEINFO(TYPE);

117 /*
118 *****
119 * There is a bug in the way that midl and the marshalling code handles
120 * unions so we need to fix some of the data offsets at runtime. The
121 * following macros and the fixup function handle the correction.
122 *****
123 */

125 /*
126 * DECL_FIXUP_STRUCT allows us to declare external references to data
127 * structures generated by ndrngen in the _ndr.c file.
128 */
129 #define DECL_FIXUP_STRUCT(NAME) extern struct ndr_typeinfo ndt_##NAME

131 /*
132 * CASE_INFO_ENT is intended to simplify the declaration of the case
133 * statement in the fixup function. Assuming you have followed the
134 * convention for naming the individual structures all you have to do
135 * is add a single line to the fixup function for each new case.
136 */
137 #define CASE_INFO_ENT(NAME,N) \
138     case N: sizel = sizeof (struct NAME##N); \
139     break

141 /*
142 * FIXUP_PDU_SIZE is used to patch the appropriate structures (identified
143 * by DECL_FIXUP_STRUCT) at runtime. The values are based on the
144 * switch_index.
145 */
146 #define FIXUP_PDU_SIZE(NAME,SIZE) { \
147     ndt_##NAME.pdu_size_fixed_part = SIZE; \
148     ndt_##NAME.c_size_fixed_part = SIZE; \
149 }

152 #endif /* NDRGEN */

154 /*
155 * UNION_INFO_ENT is intended to simplify adding new entries to a union.
156 * If the entry structures are named using the form FunctionNameX,
157 * where X is the sitch_value, you can just add a single line. Note
158 * that you must also update the fixup function in mlsvc_xxx.c.
159 */
160 #define UNION_INFO_ENT(N,NAME) CASE(N) struct NAME##N info##N
161 #define UNION_INFO_PTR(N,NAME) CASE(N) struct NAME##N *info##N

163 /*
164 * Opaque context handle.
165 */
166 #ifndef CONTEXT_HANDLE
167 #define CONTEXT_HANDLE(NAME) \
168     struct NAME { \
169         DWORD data1; \
170         DWORD data2; \
171         WORD data3[2]; \
172         BYTE data4[8]; \
173     };
174 #typedef struct NAME
175 #endif /* CONTEXT_HANDLE */

```

```

177 #endif /* _NDRTYPES_NDL */
170 #endif /* _NDR_TYPES_NDL */

```

new/usr/src/lib/libmlrpc/common/rpcpdu.ndl

1

```
*****
2020 Sun Mar 18 01:13:17 2018
new/usr/src/lib/libmlrpc/common/rpcpdu.ndl
1575 untangle libmlrpc .. (libmlrpc)
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21 /*
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23 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
24 */

26 #ifndef _RPCPDU_NDL_
27 #define _RPCPDU_NDL_

29 #include "ndrtypes.ndl"

31 /*
32 * Normally, constructs are (un)marshalled atoms first, then
33 * constructs, then pointers. This can be confusing sometimes
34 * when debugging. We know that everything in here can be
35 * safely (un)marshalled in member order, so we say so.
36 */
37 #ifdef NDRGEN
38 #define _NO_REORDER_ [_no_reorder]
39 #else
40 #define _NO_REORDER_
41 #endif

43 #define NDR_TRANSFER_SYNTAX_UUID          "8a885d04-1ceb-11c9-9fe8-08002b104860"

45 /*
46 * UUID (Universal Unique Identifier)
47 */
48 /* (X/Open CAE Spec Appendix A) */
49 struct ndr_dce_uuid {
50     DWORD           time_low;
51     WORD            time_mid;
52     WORD            time_hi_and_version;
53     BYTE            clock_seq_hi_and_reserved;
54     BYTE            clock_seq_low;
55     BYTE            node[6];
56 };
_____unchanged_portion_omitted_____
```

new/usr/src/lib/libmlrpc/i386/Makefile

1

976 Sun Mar 18 01:13:17 2018

new/usr/src/lib/libmlrpc/i386/Makefile

1575 untangle libmlrpc .. (libmlrpc)

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21 #
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23 # Use is subject to license terms.
24 #
25 # ident "%Z%M% %I% %E% SMI"
26 #
```

```
26 include ../Makefile.com
```

```
30 DYNFLAGS += -R/usr/lib/smbstrv
```

```
28 install: all $(ROOTLIBS) $(ROOTLINKS) $(ROOTLINT)
```


new/usr/src/lib/libmlrpc/sparc/Makefile

1

976 Sun Mar 18 01:13:17 2018

new/usr/src/lib/libmlrpc/sparc/Makefile

1575 untangle libmlrpc .. (libmlrpc)

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24 #
25 # ident "%Z%M% %I% %E% SMI"
26 #

26 include ../Makefile.com

30 DYNFLAGS += -R/usr/lib/smbstrv

28 install: all $(ROOTLIBS) $(ROOTLINKS) $(ROOTLINT)
```

new/usr/src/lib/libmlrpc/sparcv9/Makefile

1

1063 Sun Mar 18 01:13:18 2018

new/usr/src/lib/libmlrpc/sparcv9/Makefile

1575 untangle libmlrpc .. (libmlrpc)

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22 # Copyright 2007 Sun Microsystems, Inc. All rights reserved.
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24 #
25 # ident "%Z%M% %I% %E% SMI"
26 #

26 MACH_LDLIBS += -L$(ROOT)/usr/lib/smbstrv/$(MACH64)

28 include ../Makefile.com
29 include .././Makefile.lib.64
31 include .././././Makefile.lib.64

33 DYNFLAGS += -R/usr/lib/smbstrv/$(MACH64)

31 install: all $(ROOTLIBS64) $(ROOTLINKS64) $(ROOTLINT64)
```

```

*****
2686 Sun Mar 18 01:13:18 2018
new/usr/src/lib/libmbfs/Makefile.com
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...
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26 #
27 # Copyright 2013 Nexenta Systems, Inc. All rights reserved.
28 #
29 #
30 #
31 # lib/libmbfs/Makefile.com
32 #
33 #
34 LIBRARY=      libmbfs.a
35 VERS=        .1
36 #
37 # leaving out: kiconv.o
38 #
39 OBJ_LIB=\
40 acl_api.o \
41 acl_print.o \
42 charsets.o \
43 cftop.o \
44 connect.o \
45 crypt.o \
46 ctx.o \
47 derparse.o \
48 file.o \
49 findvc.o \
50 getaddr.o \
51 iod_cl.o \
52 iod_wk.o \
53 keychain.o \
54 krb5ssp.o \
55 mbuf.o \
56 nb.o \
57 nb_name.o \
58 nb_net.o \
59 nb_ssn.o \
60 nbns_rq.o \

```

```

61 negprot.o \
62 netshareenum.o \
63 newvc.o \
64 nls.o \
65 ntlm.o \
66 ntlmssp.o \
67 print.o \
68 rap.o \
69 rcfile.o \
70 rq.o \
71 signing.o \
72 spnego.o \
73 spnego.o \
74 spnego.o \
75 ssnsetup.o \
76 ssp.o \
77 subr.o \
78 ui-sun.o \
79 utf_str.o
80 #
81 OBJ_CMN= smbfs_ntacl.o
82 #
83 include $(SRC)/lib/Makefile.lib
84 #
85 LIBS =      $(DYNLIB) $(LINTLIB)
86 #
87 SRCDIR=     ../smb
88 CMNDIR=     $(SRC)/common/smbclnt
89 #
90 SRCS=       $(OBJ_LIB:%.o=$(SRCDIR)/%.c) \
91             $(OBJ_CMN:%.o=$(CMNDIR)/%.c)
92 #
93 $(LINTLIB) := SRCS = $(SRCDIR)/$(LINTSRC)
94 #
95 CSTD=       $(CSTD_GNU99)
96 #
97 LDLIBS += -lsocket -lnsl -lc -lmd -lpkcs11 -lkrb5 -lsec -lidmap
98 #
99 # normal warnings...
100 CFLAGS +=   $(CCVERBOSE)
101 #
102 CERRWARN += -_gcc=-Wno-uninitialized
103 CERRWARN += -_gcc=-Wno-unused-variable
104 #
105 CPPFLAGS += -D__EXTENSIONS__ -D_REENTRANT -DMIA \
106             -I$(SRCDIR) -I.. -I../netsmb \
107             -I$(SRC)/uts/common \
108             -I$(SRC)/common/smbclnt
109 #
110 # Debugging
111 ${NOT_RELEASE_BUILD} CPPFLAGS += -DDEBUG
112 #
113 # uncomment these for dbx debugging
114 #COPTFLAG = -g
115 #CTF_FLAGS =
116 #CTFCONVERT_O=
117 #CTFMERGE_LIB=
118 #
119 # Filter out the less important lint.
120 # See lgrep.awk
121 LGREP = $(AWK) -f $(SRCDIR)/lgrep.awk
122 LTAIL +=   2>&1 | $(LGREP)
123 #
124 all:        $(LIBS)

```

new/usr/src/lib/libmbfs/Makefile.com

3

```
126 lint: lintcheck_t
128 include ../../Makefile.targ
130 lintcheck_t: $$SRCS
131     $(LINT.c) $(LINTCHECKFLAGS) $(SRCS) $(LDLIBS) $(LTAIL)
133 objs/%.o pics/%.o: $(CMNDIR)/%.c
134     $(COMPILE.c) -o $@ $<
135     $(POST_PROCESS_O)
137 .KEEP_STATE:
```

new/usr/src/lib/libsmbfs/smb/l1ib-lsmbfs

1

1202 Sun Mar 18 01:13:18 2018

new/usr/src/lib/libsmbfs/smb/l1ib-lsmbfs

3328 smbutil view doesn't work with Win2008 and later

requires 1575 untangle libmlrpc ...

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27 */

29 /*LINTLIBRARY*/
30 /*PROTOLIB1*/

32 #include <netsmb/smbfs_api.h>
33 #include <netsmb/smbfs_acl.h>

35 #include <netsmb/smb_lib.h>
36 #include <netsmb/smb_keychain.h>
37 #include <netsmb/smb_netshareenum.h>
37 #include <netsmb/smb_rap.h>
38 #include <netsmb/spnego.h>
```

```

*****
3686 Sun Mar 18 01:13:18 2018
new/usr/src/lib/libmbfs/smb/mapfile-vers
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...
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23 #
24 #
25 #
26 # MAPFILE HEADER START
27 #
28 # WARNING: STOP NOW. DO NOT MODIFY THIS FILE.
29 # Object versioning must comply with the rules detailed in
30 #
31 #     usr/src/lib/README.mapfiles
32 #
33 # You should not be making modifications here until you've read the most current
34 # copy of that file. If you need help, contact a gatekeeper for guidance.
35 #
36 # MAPFILE HEADER END
37 #
38 #
39 $mapfile_version 2
40 #
41 SYMBOL_VERSION SUNWprivate {
42     global:
43         convert_leunicode_to_utf8;
44         convert_unicode_to_utf8;
45         convert_utf8_to_leunicode;
46         convert_utf8_to_unicode;
47         convert_utf8_to_winc;
48         convert_winc_to_utf8;
49 #
50     nb_ctx_create;
51     nb_ctx_done;
52     nb_ctx_readrcsection;
53     nb_ctx_resolve;
54     nb_ctx_setns;
55     nb_resolvehost_in;
56     nb_strerror;
57     nbns_getnodestatus;
58     nbns_resolvename;
59 #
60     nls_str_toloc;

```

```

61     nls_str_upper;
62 #
63     smb_close_rcfile;
64 #
65     smb_ctx_alloc;
66     smb_ctx_done;
67     smb_ctx_flags2;
68     smb_ctx_free;
69     smb_ctx_get_ssn;
70     smb_ctx_get_tree;
71     smb_ctx_gethandle;
72     smb_ctx_init;
73     smb_ctx_kill;
74     smb_ctx_opt;
75     smb_ctx_parseunc;
76     smb_ctx_readrc;
77     smb_ctx_resolve;
78     smb_ctx_scan_argv;
79     smb_ctx_set_close_hook;
80 #
81     smb_ctx_setauthflags;
82     smb_ctx_setdomain;
83     smb_ctx_setfullserver;
84     smb_ctx_setnbflags;
85     smb_ctx_setpassword;
86     smb_ctx_setpwhash;
87     smb_ctx_setscope;
88     smb_ctx_setserver;
89     smb_ctx_setshare;
90     smb_ctx_setsigning;
91     smb_ctx_setsrvaddr;
92     smb_ctx_setuser;
93     smb_ctx_setwins;
94 #
95     smb_debug           { FLAGS = NODIRECT }; # data
96     smb_error;
97 #
98 # Functions to support named pipes
99     smb_fh_close;
100     smb_fh_getssnkey;
101     smb_fh_open;
102     smb_fh_read;
103     smb_fh_write;
104     smb_fh_xactnp;
105 #
106     smb_get_authentication;
107     smb_getprogname;
108     smb_iod_connect;
109     smb_iod_door_path;
110     smb_iod_open_door;
111     smb_iod_start;
112     smb_iod_work;
113     smb_lib_init;
114     smb_netshareenum; # will move to libnetapi
115     smb_open_printer;
116     smb_open_rcfile;
117     smb_simplecrypt;
118     smb_simpledecrypt;
119     smb_strerror;
120 #
121 # Functions to support the Remote Access Protocol (RAP)
122     smb_rap_create;
123     smb_rap_done;
124     smb_rap_error;
125     smb_rap_getNparam;
126     smb_rap_request;

```

```
126     smb_rap_setNparam;
127     smb_rap_setPparam;
128 #
129     smb_verbose           { FLAGS = NODIRECT }; # data
130 #
131 # Functions to support Access Control Lists (ACLs)
132     smbfs_acl_free_sd;
133     smbfs_acl_get;
134     smbfs_acl_getsd;
135     smbfs_acl_print_sd;
136     smbfs_acl_sd2zfs;
137     smbfs_acl_set;
138     smbfs_acl_setsd;
139     smbfs_acl_zfs2sd;
140 #
141     smbfs_default_dom_usr;
142     smbfs_keychain_add;
143     smbfs_keychain_addhash;
144     smbfs_keychain_chk;
145     smbfs_keychain_del;
146     smbfs_keychain_del_everyone;
147     smbfs_keychain_del_owner;
148
149     smbfs_set_default_domain;
150     smbfs_set_default_user;
151
152     smbutil_std_opts;
153
154     spnegoCreateNegTokenHint;
155     spnegoCreateNegTokenInit;
156     spnegoCreateNegTokenTarg;
157     spnegoFreeData;
158     spnegoGetContextFlags;
159     spnegoGetMechListMIC;
160     spnegoGetMechToken;
161     spnegoGetNegotiationResult;
162     spnegoGetSupportedMechType;
163     spnegoGetTokenType;
164     spnegoInitFromBinary;
165     spnegoIsMechTypeAvailable;
166     spnegoTokenGetBinary;
167     local:
168     *;
169 };
_____unchanged_portion_omitted_____
```

new/usr/src/lib/smbsrv/Makefile

1

1133 Sun Mar 18 01:13:18 2018

new/usr/src/lib/smbsrv/Makefile

1575 untangle libmlrpc .. (smbsrv)

```
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24 # Copyright 2013 Nexenta Systems, Inc. All rights reserved.
25 #
26 #
27 include ../Makefile.lib
28 #
29 SUBDIRS = \
30     libfksmbsrv \
31     libmlsvc \
32     libmlrpc \
33     lib smb \
34     lib smb ns \
35     lib smb rp
36 include ../Makefile.subdirs
37 #
38 libmlrpc: lib smb
39 lib smb ns: lib smb
40 lib ml svc: lib smb lib smb ns
41 lib ml svc: lib smb lib ml rpc lib smb ns
42 lib fksmbsrv: lib smb
```


new/usr/src/lib/smbsrv/Makefile.targ

1

1244 Sun Mar 18 01:13:18 2018

new/usr/src/lib/smbsrv/Makefile.targ

1575 untangle libmlrpc .. (smbsrv)

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25 # Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 #
27 #ident "%Z%M% %I% %E% SMI"

28 #
29 # Common targets for smbsrv Makefiles
30 #

32 %_ndr.c: $(NDLDIR)/%.ndl
33     $(NDRGEN) -Y $(ANSI_CPP) $(CPPFLAGS) $<
34     $(NDRGEN) -Y $(CC) $<

35 pics/%.o: $(SRC)/common/smbsrv/%.c
36     $(COMPILE.c) -o $@ $<
37     $(POST_PROCESS_O)

39 pics/%.o := CPPFLAGS += -I$(ROOTSMBHDRDIR)/ndl

41 .KEEP_STATE:

43 all: $(LIBS)

45 lint: lintcheck
```

new/usr/src/lib/smbstrv/libmlsvc/common/dssetup_clnt.c

1

```
*****
2668 Sun Mar 18 01:13:18 2018
new/usr/src/lib/smbstrv/libmlsvc/common/dssetup_clnt.c
1575 untangle libmlrpc .. (smbstrv)
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24 */

26 /*
27 * Client side for the DSSETUP RPC service.
28 */

30 #include <string.h>
31 #include <strings.h>
32 #include <smb/wintypes.h>
32 #include <smbstrv/wintypes.h>
33 #include <smbstrv/libmsmb.h>
34 #include <smbstrv/ndl/dssetup.ndl>
35 #include <smbstrv/libmlsvc.h>

37 int
38 dssetup_get_domain_info(ds_primary_domain_info_t *ds_info)
39 {
40     dssetup_DsRoleGetPrimaryDomainInfo_t arg;
41     struct dssetup_DsRolePrimaryDomInfo_t *info;
42     smb_domainex_t di;
43     mlsvc_handle_t handle;
44     int opnum;
45     int rc;

47     if (!smb_domain_getinfo(&di))
48         return (-1);

50     if (ndr_rpc_bind(&handle, di.d_dci.dc_name, di.d_primary.di_nname,
51         MLSVC_ANON_USER, "DSSETUP") != 0)
52         return (-1);

54     opnum = DSSETUP_OPNUM_DsRoleGetPrimaryDomainInfo;
55     bzero(&arg, sizeof (dssetup_DsRoleGetPrimaryDomainInfo_t));
56     arg.level = DS_ROLE_BASIC_INFORMATION;

58     rc = ndr_rpc_call(&handle, opnum, &arg);
59     if ((rc != 0) || (arg.status != 0) || arg.info == NULL) {
60         ndr_rpc_unbind(&handle);
```

new/usr/src/lib/smbstrv/libmlsvc/common/dssetup_clnt.c

2

```
61         return (-1);
62     }

64     info = &arg.info->ru.infol;

66     if (info->nt_domain == NULL ||
67         info->dns_domain == NULL ||
68         info->forest == NULL) {
69         ndr_rpc_unbind(&handle);
70         return (-1);
71     }

73     bcopy(info, ds_info, sizeof (ds_primary_domain_info_t));
74     ds_info->nt_domain = (uint8_t *)strdup((char *)info->nt_domain);
75     ds_info->dns_domain = (uint8_t *)strdup((char *)info->dns_domain);
76     ds_info->forest = (uint8_t *)strdup((char *)info->forest);

78     ndr_rpc_unbind(&handle);
79     return (0);
80 }
_____unchanged_portion_omitted_____
```

```
*****
6751 Sun Mar 18 01:13:19 2018
new/usr/src/lib/smbdrv/libmlsvc/common/dssetup_svc.c
1575 untangle libmlrpc .. (smbdrv)
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22 /*
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24  * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
25  */

27 /*
28  * Active Directory Setup RPC interface used by Windows 2000.
29  */

31 #include <synch.h>
32 #include <strings.h>
33 #include <stdlib.h>
34 #include <netdb.h>

36 #include <libmlrpc/libmlrpc.h>
37 #include <smbdrv/libmb.h>
38 #include <smbdrv/libmlrpc.h>
39 #include <smbdrv/libmlsvc.h>
40 #include <smbdrv/ndl/dssetup.ndl>
41 #include <smbdrv/smbinfo.h>
42 #include <smbdrv/nmpipes.h>

43 int dssetup_get_domain_info(ds_primary_domain_info_t *);

45 static int dssetup_DsRoleGetPrimaryDomainInfo(void *, ndr_xa_t *);
46 static uint32_t dssetup_member_server(ds_primary_domain_info_t *, ndr_xa_t *);
47 static uint32_t dssetup_standalone_server(ds_primary_domain_info_t *,
48     ndr_xa_t *);

50 static ndr_stub_table_t dssetup_stub_table[] = {
51     { dssetup_DsRoleGetPrimaryDomainInfo,
52       DSSETUP_OPNUM_DsRoleGetPrimaryDomainInfo },
53     {0}
54 };
unchanged_portion_omitted
```

new/usr/src/lib/smbstr/libmlsvc/common/eventlog_svc.c

1

```

*****
15457 Sun Mar 18 01:13:19 2018
new/usr/src/lib/smbstr/libmlsvc/common/eventlog_svc.c
1575 untangle libmlrpc .. (smbstr)
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23  * Copyright (c) 2009, 2010, Oracle and/or its affiliates. All rights reserved.
24  * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
25  */

27 /*
28  * Event Log Service RPC (LOGR) interface definition.
29  */
30 #include <sys/utsname.h>
31 #include <unistd.h>
32 #include <strings.h>
33 #include <libmlrpc/libmlrpc.h>
34 #include <smbstr/libmb.h>
35 #include <smbstr/libmlrpc.h>
36 #include <smbstr/nmpipes.h>
37 #include <smbstr/libmlsvc.h>
38 #include <smbstr/nd1/eventlog.nd1>

40 #define LOGR_FWD          +1
41 #define LOGR_REW         -1
42 #define LOGR_RECORD_SIGNATURE 0x654C664C

44 #define LOGR_PRI(p)      ((p) & LOG_PRIMASK)
45 #define LOGR_WNSTRLEN(S) ((strlen((S)) + 1) * sizeof (smb_wchar_t))

47 #define LOGR_MSG_DWORD_OFFSET 12
48 #define LOGR_MSG_WORD_OFFSET  4

50 /*
51  * READ flags for EventLogRead
52  *
53  * EVENTLOG_SEEK_READ
54  * The read operation proceeds from the record specified by the
55  * dwRecordOffset parameter. This flag cannot be used with
56  * EVENTLOG_SEQUENTIAL_READ.
57  *
58  * EVENTLOG_SEQUENTIAL_READ
59  * The read operation proceeds sequentially from the last call to the
60  * ReadEventLog function using this handle. This flag cannot be used

```

new/usr/src/lib/smbstr/libmlsvc/common/eventlog_svc.c

2

```

61  * with EVENTLOG_SEEK_READ.
62  *
63  * If the buffer is large enough, more than one record can be read at
64  * the specified seek position; you must specify one of the following
65  * flags to indicate the direction for successive read operations.
66  *
67  * EVENTLOG_FORWARDS_READ
68  * The log is read in chronological order. This flag cannot be used
69  * with EVENTLOG_BACKWARDS_READ.
70  *
71  * EVENTLOG_BACKWARDS_READ
72  * The log is read in reverse chronological order. This flag cannot be
73  * used with EVENTLOG_FORWARDS_READ.
74  */
75 #define EVENTLOG_SEQUENTIAL_READ      0x0001
76 #define EVENTLOG_SEEK_READ           0x0002
77 #define EVENTLOG_FORWARDS_READ      0x0004
78 #define EVENTLOG_BACKWARDS_READ     0x0008

80 /*
81  * The types of events that can be logged.
82  */
83 #define EVENTLOG_SUCCESS              0x0000
84 #define EVENTLOG_ERROR_TYPE          0x0001
85 #define EVENTLOG_WARNING_TYPE       0x0002
86 #define EVENTLOG_INFORMATION_TYPE   0x0004
87 #define EVENTLOG_AUDIT_SUCCESS      0x0008
88 #define EVENTLOG_AUDIT_FAILURE      0x0010

90 /*
91  * Event Identifiers
92  *
93  * Event identifiers uniquely identify a particular event. Each event
94  * source can define its own numbered events and the description strings
95  * to which they are mapped. Event viewers can present these strings to
96  * the user. They should help the user understand what went wrong and
97  * suggest what actions to take. Direct the description at users solving
98  * their own problems, not at administrators or support technicians.
99  * Make the description clear and concise and avoid culture-specific
100 * phrases.
101 *
102 * The following diagram illustrates the format of an event identifier.
103 *
104 *   3 3 2 2 2 2 2 2 2 2 2 1 1 1 1 1 1 1 1 1 1 1
105 *   1 0 9 8 7 6 5 4 3 2 1 0 9 8 7 6 5 4 3 2 1 0 9 8 7 6 5 4 3 2 1 0
106 *   +---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
107 *   |Sev|C|R|          Facility          |          Code          |
108 *   +---+---+---+---+---+---+---+---+---+---+---+---+---+---+---+
109 *
110 * Sev
111 *   Indicates the severity. This is one of the following values:
112 *   00 - Success
113 *   01 - Informational
114 *   10 - Warning
115 *   11 - Error
116 *
117 * C
118 *   Indicates a customer code (1) or a system code (0).
119 *
120 * R
121 *   Reserved bit.
122 *
123 * Facility
124 *   Facility code.
125 *
126 * Code
127 *   Status code for the facility.
128 *
129 *
130 #define EVENTID_SEVERITY_SUCCESS      0x00000000

```

```
127 #define EVENTID_SEVERITY_INFO      0x40000000
128 #define EVENTID_SEVERITY_WARNING   0x80000000
129 #define EVENTID_SEVERITY_ERROR     0xC0000000

131 #define EVENTID_SYSTEM_CODE        0x00000000
132 #define EVENTID_CUSTOMER_CODE     0x20000000

134 static int logr_s_EventLogClose(void *, ndr_xa_t *);
135 static int logr_s_EventLogQueryCount(void *, ndr_xa_t *);
136 static int logr_s_EventLogGetOldestRec(void *, ndr_xa_t *);
137 static int logr_s_EventLogOpen(void *, ndr_xa_t *);
138 static int logr_s_EventLogRead(void *, ndr_xa_t *);

140 static ndr_stub_table_t logr_stub_table[] = {
141     { logr_s_EventLogClose,      LOGR_OPNUM_EventLogClose },
142     { logr_s_EventLogQueryCount, LOGR_OPNUM_EventLogQueryCount },
143     { logr_s_EventLogGetOldestRec, LOGR_OPNUM_EventLogGetOldestRec },
144     { logr_s_EventLogOpen,      LOGR_OPNUM_EventLogOpen },
145     { logr_s_EventLogRead,      LOGR_OPNUM_EventLogRead },
146     { 0 }
147 };
_____unchanged_portion_omitted_____
```

new/usr/src/lib/smbstrv/libmlsvc/common/libmlsvc.h

1

```
*****
8943 Sun Mar 18 01:13:19 2018
new/usr/src/lib/smbstrv/libmlsvc/common/libmlsvc.h
1575 untangle libmlrpc ... (smbstrv)
1575 untangle libmlrpc ... pre2:
Get rid of ndr_rpc_server_{info,os}
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright (c) 2007, 2010, Oracle and/or its affiliates. All rights reserved.
23 * Copyright 2015 Nexenta Systems, Inc. All rights reserved.
24 */

26 #ifndef _LIBMLSVC_H
27 #define _LIBMLSVC_H

29 #include <uuid/uuid.h>
29 #include <sys/param.h>
30 #include <sys/types.h>
31 #include <sys/uio.h>
32 #include <sys/ksynch.h>
33 #include <uuid/uuid.h>

35 #include <time.h>
36 #include <stdio.h>
37 #include <string.h>
38 #include <syslog.h>
39 #include <netdb.h>
40 #include <libutil.h>

42 #include <smb/wintypes.h>
43 #include <libmlrpc/libmlrpc.h>

39 #include <smbstrv/wintypes.h>
45 #include <smbstrv/hash_table.h>
46 #include <smbstrv/smb_token.h>
47 #include <smbstrv/smb_privilege.h>
48 #include <smbstrv/smb_share.h>
49 #include <smbstrv/smb_xdr.h>
50 #include <smbstrv/smb_dfs.h>
51 #include <smbstrv/lib smb.h>
47 #include <smbstrv/libmlrpc.h>
48 #include <smbstrv/ndl/lsarpc.ndl>

53 #ifdef __cplusplus
54 extern "C" {
55 #endif
```

new/usr/src/lib/smbstrv/libmlsvc/common/libmlsvc.h

2

```
57 uint32_t lsa_lookup_name(char *, uint16_t, smb_account_t *);
58 uint32_t lsa_lookup_sid(smb_sid_t *, smb_account_t *);

60 /*
61  * SMB domain API to discover a domain controller and obtain domain
62  * information.
63  */

65 extern boolean_t smb_locate_dc(char *, smb_domainex_t *);
66 uint32_t smb_ddiscover_dns(char *, smb_domainex_t *);
67 extern void smb_ddiscover_bad_dc(char *);
68 extern void smb_ddiscover_refresh(void);
69 extern int smb_ddiscover_wait(void);

71 extern int dssetup_check_service(void);
72 extern void dssetup_clear_domain_info(void);
73 extern void mlsvc_disconnect(const char *);
74 extern int mlsvc_init(void);
75 extern void mlsvc_fini(void);
76 extern DWORD mlsvc_netlogon(char *, char *);
77 extern void mlsvc_join(smb_joininfo_t *, smb_joinres_t *);

79 extern void smb_logon_domain(smb_logon_t *, smb_token_t *);
80 extern uint32_t smb_decode_krb5_pac(smb_token_t *, char *, uint_t);
81 extern boolean_t smb_token_setup_common(smb_token_t *);

84 /*
85  * The maximum number of domains (NT limit).
86  */
87 #define MLSVC_DOMAIN_MAX 32

89 #define MLSVC_ANON_USER "IPC$"

91 char *mlsvc_ipc_name(int ipc_type, char *username);

93 /*
94  * Passthrough negotiation and authentication interface.
95  *
96  * NT supports two forms of password: a Lanman (case-insensitive)
97  * password and an NT (case-sensitive) password. If either of the
98  * passwords is not available its pointer and length should be set
99  * to zero. The session key and vc number are required to validate
100 * the encrypted passwords.
101 */

103 void mlsvc_nt_password_hash(char *result, char *password);
104 int mlsvc_encrypt_nt_password(char *password, char *key, int keylen, char *out,
105 int outmax);

107 #define SMB_AUTOHOME_FILE "smbautohome"
108 #define SMB_AUTOHOME_PATH "/etc"

110 typedef struct smb_autohome {
111     struct smb_autohome *ah_next;
112     uint32_t ah_hits;
113     time_t ah_timestamp;
114     char *ah_name; /* User account name */
115     char *ah_path; /* Home directory path */
116     char *ah_container; /* ADS container distinguished name */
117 } smb_autohome_t;
_____ unchanged portion omitted

133 /*
131 * Information about a server as reported by NetServerGetInfo.
```

```

132 * The SV_PLATFORM and SV_TYPE definitions are in srvsvc.ndl.
133 */
134 typedef struct srvsvc_server_info {
135     uint32_t      sv_platform_id;
136     char          *sv_name;
137     uint32_t      sv_version_major;
138     uint32_t      sv_version_minor;
139     uint32_t      sv_type;
140     char          *sv_comment;
141     uint32_t      sv_os;
142 } srvsvc_server_info_t;

144 int srvsvc_net_server_getinfo(char *, char *, srvsvc_server_info_t *);
145 int srvsvc_net_remote_tod(char *, char *, struct timeval *, struct tm *);

148 /*
134 * A client_t is created while binding a client connection to hold the
135 * context for calls made using that connection.
136 *
137 * Handles are RPC call specific and we use an inheritance mechanism to
138 * ensure that each handle has a pointer to the client_t. When the top
139 * level (bind) handle is released, we close the connection.
140 */
141 typedef struct mlrpc_handle mlsvc_handle_t;
142 typedef struct mlsvc_handle {
143     ndr_hdid_t      handle;
144     ndr_client_t    *clnt;
145     srvsvc_server_info_t svinfo;
146 } mlsvc_handle_t;

143 /* mlsvc_client.c */
144 void ndr_rpc_init(void);
145 void ndr_rpc_fini(void);
146 uint32_t ndr_rpc_bind(mlsvc_handle_t *, char *, char *, char *, const char *);
147 void ndr_rpc_unbind(mlsvc_handle_t *);
148 int ndr_rpc_call(mlsvc_handle_t *, int, void *);
149 void ndr_rpc_set_nonnull(mlsvc_handle_t *);
150 const srvsvc_server_info_t *ndr_rpc_server_info(mlsvc_handle_t *);
151 uint32_t ndr_rpc_server_os(mlsvc_handle_t *);
152 int ndr_rpc_get_ssnkey(mlsvc_handle_t *, unsigned char *, size_t);
153 void *ndr_rpc_malloc(mlsvc_handle_t *, size_t);
154 ndr_heap_t *ndr_rpc_get_heap(mlsvc_handle_t *);
155 void ndr_rpc_release(mlsvc_handle_t *);
156 boolean_t ndr_is_null_handle(mlsvc_handle_t *);
157 boolean_t ndr_is_bind_handle(mlsvc_handle_t *);
158 void ndr_inherit_handle(mlsvc_handle_t *, mlsvc_handle_t *);
159 void ndr_rpc_status(mlsvc_handle_t *, int, uint32_t);

150 /* These three get info about the connected client. */
151 boolean_t ndr_is_admin(ndr_xa_t *);
152 boolean_t ndr_is_poweruser(ndr_xa_t *);
153 int32_t ndr_native_os(ndr_xa_t *);

155 /* SRVSVC */
156 int srvsvc_net_remote_tod(char *, char *, struct timeval *, struct tm *);

158 /* SVCCTL service */
159 /*
160 * Calculate the wide-char equivalent string length required to
161 * store a string - including the terminating null wide-char.
162 */
163 #define SVCCTL_WNSTRLEN(S)      ((strlen((S)) + 1) * sizeof (smb_wchar_t))

165 /* An AVL-storable node representing each service in the SCM database. */
166 typedef struct svcctl_svc_node {

```

```

167     uu_avl_node_t      sn_node;
168     char               *sn_name;      /* Service Name (Key) */
169     char               *sn_fmri;     /* Display Name (FMRI) */
170     char               *sn_desc;     /* Description */
171     char               *sn_state;    /* State */
172 } svcctl_svc_node_t;

```

unchanged_portion_omitted

```

*****
36674 Sun Mar 18 01:13:19 2018
new/usr/src/lib/smbsrv/libmlsvc/common/lsar_clnt.c
1575 untangle libmlrpc ... pre2:
Get rid of ndr_rpc_server_{info,os}
*****
unchanged_portion_omitted_

373 /*
374 * Lookup a name and obtain the sid/rid.
375 * This is a wrapper for the various lookup sid RPCs.
376 */
377 uint32_t
378 lsar_lookup_names(mlsvc_handle_t *lsa_handle, char *name, smb_account_t *info)
379 {
380     static lsar_nameop_t ops[] = {
381         lsar_lookup_names3,
382         lsar_lookup_names2,
383         lsar_lookup_names1
384     };

386     const srvsvc_server_info_t *svinfo;
387     lsa_names_t names;
388     char *p;
389     uint32_t length;
390     uint32_t status = NT_STATUS_INVALID_PARAMETER;
391     int n_op = (sizeof(ops) / sizeof(ops[0]));
392     int i;

393     if (lsa_handle == NULL || name == NULL || info == NULL)
394         return (NT_STATUS_INVALID_PARAMETER);

396     bzero(info, sizeof(smb_account_t));

399     svinfo = ndr_rpc_server_info(lsa_handle);
400     if (svinfo->sv_os == NATIVE_OS_WIN2000 &&
401         svinfo->sv_version_major == 5 && svinfo->sv_version_minor == 0) {
398         /*
399          * Windows 2000 (or later) doesn't like an LSA lookup for
400          * Windows 2000 doesn't like an LSA lookup for
401          * DOMAIN\Administrator.
402          */
403         if ((p = strchr(name, '\\')) != 0) {
404             ++p;

405             if (strcasecmp(p, "administrator") == 0)
406                 name = p;
407         }

413     }

409     length = smb_wcequiv_strlen(name);
410     names.name[0].length = length;
411     names.name[0].allosize = length;
412     names.name[0].str = (unsigned char *)name;
413     names.n_entry = 1;

421     if (ndr_rpc_server_os(lsa_handle) == NATIVE_OS_WIN2000) {
415         for (i = 0; i < n_op; ++i) {
416             ndr_rpc_set_nonnull(lsa_handle);
417             status = (*ops[i])(lsa_handle, &names, info);

419             if (status != NT_STATUS_INVALID_PARAMETER)
420                 break;
421         }
429     } else {

```

```

430         ndr_rpc_set_nonnull(lsa_handle);
431         status = lsar_lookup_names1(lsa_handle, &names, info);
432     }

423     if (status == NT_STATUS_SUCCESS) {
424         info->a_name = lsar_get_username(name);

426         if (!smb_account_validate(info)) {
427             smb_account_free(info);
428             status = NT_STATUS_NO_MEMORY;
429         } else {
430             smb_account_trace(info);
431         }
432     }

434     return (status);
435 }
unchanged_portion_omitted_

699 /*
700 * Lookup a sid and obtain the domain sid and account name.
701 * This is a wrapper for the various lookup sid RPCs.
702 */
703 uint32_t
704 lsar_lookup_sids(mlsvc_handle_t *lsa_handle, smb_sid_t *sid,
705                 smb_account_t *account)
706 {
707     char sidbuf[SMB_SID_STRSZ];
708     uint32_t status;

710     if (lsa_handle == NULL || sid == NULL || account == NULL)
711         return (NT_STATUS_INVALID_PARAMETER);

713     bzero(account, sizeof(smb_account_t));
714     bzero(sidbuf, SMB_SID_STRSZ);
715     smb_sid_tostr(sid, sidbuf);
716     smb_tracef("%s", sidbuf);

718     status = lsar_lookup_sids2(lsa_handle, (lsa_sid_t *)sid, account);
719     if (status == RPC_NT_PROCNUM_OUT_OF_RANGE)
720         if (ndr_rpc_server_os(lsa_handle) == NATIVE_OS_WIN2000)
721             status = lsar_lookup_sids2(lsa_handle, (lsa_sid_t *)sid,
722                                       account);
723     else
724         status = lsar_lookup_sids1(lsa_handle, (lsa_sid_t *)sid,
725                                   account);

727     if (status == NT_STATUS_SUCCESS) {
728         if (!smb_account_validate(account)) {
729             smb_account_free(account);
730             status = NT_STATUS_NO_MEMORY;
731         } else {
732             smb_account_trace(account);
733         }
734     }

736     return (status);
737 }
unchanged_portion_omitted_

1130 /*
1131 * lsar_lookup_priv_value
1132 *
1133 * Map a privilege name to a local unique id (LUID). Privilege names
1134 * are consistent across the network. LUIDs are machine specific.
1135 * This function provides the means to map a privilege name to the

```



```
1136 * LUID used by a remote server to represent it. The handle here is
1137 * a policy handle.
1138 */
1139 int
1140 lsar_lookup_priv_value(mlsvc_handle_t *lsa_handle, char *name,
1141                       struct ms_luid *luid)
1142 {
1143     struct mlslsa_LookupPrivValue  arg;
1144     int      opnum;
1145     int      rc;
1146     size_t   length;
1147
1148     if (lsa_handle == NULL || name == NULL || luid == NULL)
1149         return (-1);
1150
1151     opnum = LSARPC_OPNUM_LookupPrivValue;
1152
1153     bzero(&arg, sizeof (struct mlslsa_LookupPrivValue));
1154     (void) memcpy(&arg.handle, lsa_handle, sizeof (mlslsa_handle_t));
1155
1156     length = smb_wcequiv_strlen(name);
1157     if (ndr_rpc_server_os(lsa_handle) == NATIVE_OS_WIN2000)
1158         length += sizeof (smb_wchar_t);
1159
1160     arg.name.length = length;
1161     arg.name.allosize = length;
1162     arg.name.str = (unsigned char *)name;
1163
1164     rc = ndr_rpc_call(lsa_handle, opnum, &arg);
1165     if (rc == 0) {
1166         if (arg.status != 0)
1167             rc = -1;
1168         else
1169             (void) memcpy(luid, &arg.luid, sizeof (struct ms_luid));
1170     }
1171
1172     ndr_rpc_release(lsa_handle);
1173     return (rc);
1174 }
1175
1176 _____unchanged_portion_omitted_____
```

new/usr/src/lib/smbdrv/libmlsvc/common/lsar_svc.c

1

36898 Sun Mar 18 01:13:19 2018

new/usr/src/lib/smbdrv/libmlsvc/common/lsar_svc.c

1575 untangle libmlrpc .. (smbdrv)

```
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23  * Copyright (c) 2009, 2010, Oracle and/or its affiliates. All rights reserved.
24  * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
25  */

27 /*
28  * Local Security Authority RPC (LSAR) server-side interface.
29  */

31 #include <unistd.h>
32 #include <strings.h>
33 #include <pwd.h>
34 #include <grp.h>

36 #include <libmlrpc/libmlrpc.h>
37 #include <smbdrv/libmb.h>
37 #include <smbdrv/libmlrpc.h>
38 #include <smbdrv/libmlsvc.h>
39 #include <smbdrv/ndl/lsarpc.ndl>
40 #include <lsalib.h>
41 #include <smbdrv/smbinfo.h>
42 #include <smbdrv/nmpipes.h>
43 #include <smbdrv/ntlocale.h>

45 struct local_group_table {
46     WORD sid_name_use;
47     WORD domain_ix;
48     char *sid;
49     char *name;
50 };
_____unchanged_portion_omitted_____
```

```

*****
2811 Sun Mar 18 01:13:19 2018
new/usr/src/lib/smbsrv/libmlsvc/common/mlsvc.h
1575 untangle libmlrpc ... prel:
Move srvsvc_timecheck where it belongs
*****
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24 */

26 #ifndef _SMBSRV_MLSVC_H
27 #define _SMBSRV_MLSVC_H

29 #include <smbsrv/smb_share.h>
30 #include <smbsrv/ndl/netlogon.ndl>

32 #ifdef __cplusplus
33 extern "C" {
34 #endif

36 struct netr_info;

38 int smb_delocator_init(void);
39 void smbrdr_initialize(void);
40 void dssetup_initialize(void);
41 void srvsvc_initialize(void);
42 void wkssvc_initialize(void);
43 void lsarpc_initialize(void);
44 void logr_initialize(void);
45 void netr_initialize(void);
46 void samr_initialize(void);
47 void svcctl_initialize(void);
48 void winreg_initialize(void);
49 int srvsvc_gettime(unsigned long *);
49 void msgsvcsend_initialize(void);
50 void spoolss_initialize(void);
51 void netdfs_initialize(void);

53 void logr_finalize(void);
54 void svcctl_finalize(void);
55 void spoolss_finalize(void);
56 void netdfs_finalize(void);

58 /* netr_auth.c */
59 DWORD netr_open(char *, char *, mlsvc_handle_t *);

```

```

60 int netr_close(mlsvc_handle_t *);
61 DWORD netlogon_auth(char *, mlsvc_handle_t *, DWORD);
62 int netr_setup_authenticator(struct netr_info *, struct netr_authenticator *,
63     struct netr_authenticator *);
64 DWORD netr_validate_chain(struct netr_info *, struct netr_authenticator *);

66 int srvsvc_gettime(unsigned long *);
67 void srvsvc_timecheck(char *, char *);
67 void ndr_srvsvc_timecheck(char *, char *);

69 /* Generic functions to get/set windows Security Descriptors */
70 uint32_t srvsvc_sd_get(smb_share_t *, uint8_t *, uint32_t *);
71 uint32_t srvsvc_sd_set(smb_share_t *, uint8_t *);

73 uint32_t smb_logon_init(void);
74 void smb_logon_fini(void);

76 /* Locking for process-wide settings (i.e. privileges) */
77 void smb_proc_initsem(void); /* init (or re-init in child) */
78 int smb_proc_takesem(void); /* parent before */
79 void smb_proc_givesem(void); /* parent after */

81 /* Quota */
82 void smb_quota_init(void);
83 void smb_quota_fini(void);
84 void smb_quota_add_fs(const char *);
85 void smb_quota_remove_fs(const char *);

87 uint32_t smb_ddiscover_main(char *, smb_domainex_t *);

89 #ifdef __cplusplus
90 }
_____unchanged_portion_omitted_____

```

new/usr/src/lib/smbdrv/libmlsvc/common/mlsvc_client.c

1

```
*****
5816 Sun Mar 18 01:13:19 2018
new/usr/src/lib/smbdrv/libmlsvc/common/mlsvc_client.c
1575 untangle libmlrpc ... (smbdrv)
1575 untangle libmlrpc ... (libmlrpc)
1575 untangle libmlrpc ... pre2:
  Get rid of ndr_rpc_server_{info,os}
1575 untangle libmlrpc ... pre1:
  Move srsvvc_timecheck where it belongs
*****
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22 /*
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25 */

27 /*
28  * Client NDR RPC interface.
29 */

31 #include <sys/types.h>
32 #include <sys/errno.h>
33 #include <sys/fcntl.h>
34 #include <sys/tzfile.h>
34 #include <time.h>
35 #include <strings.h>
36 #include <assert.h>
37 #include <errno.h>
38 #include <thread.h>
40 #include <unistd.h>
39 #include <syslog.h>
40 #include <synch.h>

42 #include <libmlrpc/libmlrpc.h>
43 #include <netsmb/smbfs_api.h>

45 #include <smbdrv/libmb.h>
46 #include <smbdrv/libmbns.h>
47 #include <smbdrv/libmlrpc.h>
46 #include <smbdrv/libmlsvc.h>
49 #include <smbdrv/ndl/srsvvc.ndl>
47 #include <libsmbdrdr.h>
48 #include <mlsvc.h>

53 static int ndr_xa_init(ndr_client_t *, ndr_xa_t *);
54 static int ndr_xa_exchange(ndr_client_t *, ndr_xa_t *);
```

new/usr/src/lib/smbdrv/libmlsvc/common/mlsvc_client.c

2

```
55 static int ndr_xa_read(ndr_client_t *, ndr_xa_t *);
56 static void ndr_xa_preserve(ndr_client_t *, ndr_xa_t *);
57 static void ndr_xa_destruct(ndr_client_t *, ndr_xa_t *);
58 static void ndr_xa_release(ndr_client_t *);

51 /*
52  * This call must be made to initialize an RPC client structure and bind
53  * to the remote service before any RPCs can be exchanged with that service.
54  *
55  * The mlsvc_handle_t is a wrapper that is used to associate an RPC handle
56  * with the client context for an instance of the interface. The handle
57  * is zeroed to ensure that it doesn't look like a valid handle -
58  * handle content is provided by the remove service.
59  *
60  * The client points to this top-level handle so that we know when to
61  * unbind and teardown the connection. As each handle is initialized it
62  * will inherit a reference to the client context.
63  *
64  * Returns 0 or an NT_STATUS: (failed in...)
65  *
66  * Returns 0 or an NT_STATUS:
67  * NT_STATUS_BAD_NETWORK_PATH (get server addr)
68  * NT_STATUS_NETWORK_ACCESS_DENIED (connect, auth)
69  * NT_STATUS_BAD_NETWORK_NAME (tcon)
70  * RPC_NT_SERVER_TOO_BUSY (open pipe)
71  * RPC_NT_SERVER_UNAVAILABLE (open pipe)
72  * NT_STATUS_BAD_NETWORK_NAME (tcon, open)
73  * NT_STATUS_ACCESS_DENIED (open pipe)
74  * NT_STATUS_INVALID_PARAMETER (rpc bind)
75 */
76 DWORD
77 ndr_rpc_bind(mlsvc_handle_t *handle, char *server, char *domain,
78             char *username, const char *service)
79 {
80     struct smb_ctx *ctx = NULL;
81     ndr_client_t *clnt = NULL;
82     ndr_service_t *svc;
83     srsvvc_server_info_t svinfo;
84     DWORD status;
85     int fd = -1;
86     int rc;

87     if (handle == NULL || server == NULL || server[0] == '\0' ||
88         domain == NULL || username == NULL)
89         return (NT_STATUS_INTERNAL_ERROR);

90     /* In case the service was not registered... */
91     if ((svc = ndr_svc_lookup_name(service)) == NULL)
92         return (NT_STATUS_INTERNAL_ERROR);

93     /*
94      * Set the default based on the assumption that most
95      * servers will be Windows 2000 or later. This used to
96      * try to get the actual server version, but that RPC
97      * is not necessarily allowed anymore, so don't bother.
98      */
99     bzero(&svinfo, sizeof (srsvvc_server_info_t));
100     svinfo.sv_platform_id = SV_PLATFORM_ID_NT;
101     svinfo.sv_version_major = 5;
102     svinfo.sv_version_minor = 0;
103     svinfo.sv_type = SV_TYPE_DEFAULT;
104     svinfo.sv_os = NATIVE_OS_WIN2000;
```

```

117 /*
118  * Some callers pass this when they want a NULL session.
119  * Todo: have callers pass an empty string for that.
120  */
121 if (strcmp(username, MLSVC_ANON_USER) == 0)
122     username = "";
123
124 /*
125  * Setup smbfs library handle, authenticate, connect to
126  * the IPC$ share. This will reuse an existing connection
127  * if the driver already has one for this combination of
128  * server, user, domain. It may return any of:
129  * NT_STATUS_BAD_NETWORK_PATH (get server addr)
130  * NT_STATUS_NETWORK_ACCESS_DENIED (connect, auth)
131  * NT_STATUS_BAD_NETWORK_NAME (tcon)
132  */
133 status = smbldr_ctx_new(&ctx, server, domain, username);
134 if (status != NT_STATUS_SUCCESS) {
135     syslog(LOG_ERR, "ndr_rpc_bind: smbldr_ctx_new"
136           "(Srv=%s Dom=%s User=%s), %s (0x%x)",
137           server, domain, username,
138           xlate_nt_status(status), status);
139     /* Tell the DC Locator this DC failed. */
140     smb_ddiscover_bad_dc(server);
141     goto errout;
142 }
143
144 /*
145  * If the error is one where changing to a new DC
146  * might help, try looking for a different DC.
147  * Open the named pipe.
148  */
149 switch (status) {
150 case NT_STATUS_BAD_NETWORK_PATH:
151 case NT_STATUS_BAD_NETWORK_NAME:
152     /* Look for a new DC */
153     smb_ddiscover_bad_dc(server);
154     fd = smb_fh_open(ctx, svc->endpoint, O_RDWR);
155     if (fd < 0) {
156         rc = errno;
157         syslog(LOG_DEBUG, "ndr_rpc_bind: "
158               "smb_fh_open (%s) err=%d",
159               svc->endpoint, rc);
160         switch (rc) {
161             case EACCES:
162                 status = NT_STATUS_ACCESS_DENIED;
163                 break;
164             default:
165                 status = NT_STATUS_BAD_NETWORK_NAME;
166                 break;
167         }
168     }
169     return (status);
170     goto errout;
171 }
172
173 /*
174  * Setup the RPC client handle.
175  */
176 rc = mlrpc_clh_create(handle, ctx);
177 if (rc != 0) {
178     syslog(LOG_ERR, "ndr_rpc_bind: mlrpc_clh_create: rc=%d", rc);
179     smbldr_ctx_free(ctx);
180     switch (rc) {
181         case ENOMEM:
182             return (NT_STATUS_NO_MEMORY);

```

```

183     case EINVAL:
184         return (NT_STATUS_INVALID_PARAMETER);
185     default:
186         return (NT_STATUS_INTERNAL_ERROR);
187     if ((clnt = malloc(sizeof (ndr_client_t))) == NULL) {
188         status = NT_STATUS_NO_MEMORY;
189         goto errout;
190     }
191     bzero(clnt, sizeof (ndr_client_t));
192
193     clnt->handle = &handle->handle;
194     clnt->xa_init = ndr_xa_init;
195     clnt->xa_exchange = ndr_xa_exchange;
196     clnt->xa_read = ndr_xa_read;
197     clnt->xa_preserve = ndr_xa_preserve;
198     clnt->xa_destruct = ndr_xa_destruct;
199     clnt->xa_release = ndr_xa_release;
200     clnt->xa_private = ctx;
201     clnt->xa_fd = fd;
202
203     ndr_svc_binding_pool_init(&clnt->binding_list,
204                             clnt->binding_pool, NDR_N_BINDING_POOL);
205
206     if ((clnt->heap = ndr_heap_create()) == NULL) {
207         status = NT_STATUS_NO_MEMORY;
208         goto errout;
209     }
210 }
211
212 /*
213  * This does the pipe open and OtW RPC bind.
214  * Handles pipe open retries.
215  * Fill in the caller's handle.
216  */
217 status = mlrpc_clh_bind(handle, svc);
218 if (status != 0) {
219     syslog(LOG_DEBUG, "ndr_rpc_bind: "
220           "mlrpc_clh_bind, %s (0x%x)",
221           xlate_nt_status(status), status);
222     switch (status) {
223         case RPC_NT_SERVER_TOO_BUSY:
224             /* Look for a new DC */
225             smb_ddiscover_bad_dc(server);
226             bzero(&handle->handle, sizeof (ndr_hdid_t));
227             handle->clnt = clnt;
228             bcopy(&svinfo, &handle->svinfo, sizeof (srvsvc_server_info_t));
229
230             /*
231              * Do the OtW RPC bind.
232              */
233             rc = ndr_clnt_bind(clnt, service, &clnt->binding);
234             switch (rc) {
235                 case NDR_DRC_FAULT_OUT_OF_MEMORY:
236                     status = NT_STATUS_NO_MEMORY;
237                     break;
238                 case NDR_DRC_FAULT_API_SERVICE_INVALID: /* not registered */
239                     status = NT_STATUS_INTERNAL_ERROR;
240                     break;
241                 default:
242                     if (NDR_DRC_IS_FAULT(rc)) {
243                         status = NT_STATUS_INVALID_PARAMETER;
244                         break;
245                     }
246             }
247             ctx = mlrpc_clh_free(handle);
248             /* FALLTHROUGH */
249             case NDR_DRC_OK:
250                 return (NT_STATUS_SUCCESS);

```

```

217     }
219     syslog(LOG_DEBUG, "ndr_rpc_bind: "
220            "ndr_clnt_bind, %s (0x%x)",
221            xlate_nt_status(status), status);
223 errout:
224     handle->clnt = NULL;
225     if (clnt != NULL) {
226         ndr_heap_destroy(clnt->heap);
227         free(clnt);
228     }
229     if (ctx != NULL) {
230         if (fd != -1)
231             (void) smb_fh_close(fd);
232         smbrdr_ctx_free(ctx);
233     }
234 }
235
236 return (status);
237 }
238
239 /*
240 * Unbind and close the pipe to an RPC service
241 * and cleanup the smb_ctx.
242 * Unbind and close the pipe to an RPC service.
243 *
244 * The heap may or may not be destroyed (see mlrpc_clh_free)
245 * If the heap has been preserved we need to go through an xa release.
246 * The heap is preserved during an RPC call because that's where data
247 * returned from the server is stored.
248 *
249 * Otherwise we destroy the heap directly.
250 */
251 void
252 ndr_rpc_unbind(mlsvc_handle_t *handle)
253 {
254     struct smb_ctx *ctx;
255     ndr_client_t *clnt = handle->clnt;
256     struct smb_ctx *ctx = clnt->xa_private;
257
258     ctx = mlrpc_clh_free(handle);
259     if (ctx != NULL)
260         smbrdr_ctx_free(ctx);
261     if (clnt->heap_preserved)
262         ndr_clnt_free_heap(clnt);
263     else
264         ndr_heap_destroy(clnt->heap);
265
266     (void) smb_fh_close(clnt->xa_fd);
267     smbrdr_ctx_free(ctx);
268     free(clnt);
269     bzero(handle, sizeof (mlsvc_handle_t));
270 }
271
272 /*
273 * Call the RPC function identified by opnum. The remote service is
274 * identified by the handle, which should have been initialized by
275 * ndr_rpc_bind.
276 *
277 * If the RPC call is successful (returns 0), the caller must call
278 * ndr_rpc_release to release the heap. Otherwise, we release the
279 * heap here.
280 */
281 int
282 ndr_rpc_call(mlsvc_handle_t *handle, int opnum, void *params)

```

```

283 {
284     ndr_client_t *clnt = handle->clnt;
285     int rc;
286
287     if (ndr_rpc_get_heap(handle) == NULL)
288         return (-1);
289
290     rc = ndr_clnt_call(clnt->binding, opnum, params);
291
292     /*
293      * Always clear the nonull flag to ensure
294      * it is not applied to subsequent calls.
295      */
296     clnt->nonull = B_FALSE;
297
298     if (NDR_DRC_IS_FAULT(rc)) {
299         ndr_rpc_release(handle);
300         return (-1);
301     }
302
303     return (0);
304 }
305
306 /*
307 * Outgoing strings should not be null terminated.
308 */
309 void
310 ndr_rpc_set_nonull(mlsvc_handle_t *handle)
311 {
312     handle->clnt->nonull = B_TRUE;
313 }
314
315 /*
316 * Return a reference to the server info.
317 */
318 const srvsvc_server_info_t *
319 ndr_rpc_server_info(mlsvc_handle_t *handle)
320 {
321     return (&handle->svinfo);
322 }
323
324 /*
325 * Return the RPC server OS level.
326 */
327 uint32_t
328 ndr_rpc_server_os(mlsvc_handle_t *handle)
329 {
330     return (handle->svinfo.sv_os);
331 }
332
333 /*
334 * Get the session key from a bound RPC client handle.
335 *
336 * The key returned is the 16-byte "user session key"
337 * established by the underlying authentication protocol
338 * (either Kerberos or NTLM). This key is needed for
339 * SAM RPC calls such as SamrSetInformationUser, etc.
340 * See [MS-SAMR] sections: 2.2.3.3, 2.2.7.21, 2.2.7.25.
341 *
342 * Returns zero (success) or an errno.
343 */
344 int
345 ndr_rpc_get_ssnkey(mlsvc_handle_t *handle,
346                  unsigned char *ssn_key, size_t len)
347 {
348     ndr_client_t *clnt = handle->clnt;

```

```

341     int rc;

343     if (clnt == NULL)
344         return (EINVAL);

346     rc = smb_fh_getssnkey(clnt->xa_fd, ssn_key, len);
347     return (rc);
348 }

350 void *
351 ndr_rpc_malloc(mlsvd_handle_t *handle, size_t size)
352 {
353     ndr_heap_t *heap;

355     if ((heap = ndr_rpc_get_heap(handle)) == NULL)
356         return (NULL);

358     return (ndr_heap_malloc(heap, size));
359 }

361 ndr_heap_t *
362 ndr_rpc_get_heap(mlsvd_handle_t *handle)
363 {
364     ndr_client_t *clnt = handle->clnt;

366     if (clnt->heap == NULL)
367         clnt->heap = ndr_heap_create();

369     return (clnt->heap);
370 }

372 /*
373  * Must be called by RPC clients to free the heap after a successful RPC
374  * call, i.e. ndr_rpc_call returned 0. The caller should take a copy
375  * of any data returned by the RPC prior to calling this function because
376  * returned data is in the heap.
377  */
378 void
379 ndr_rpc_release(mlsvd_handle_t *handle)
380 {
381     ndr_client_t *clnt = handle->clnt;

383     if (clnt->heap_preserved)
384         ndr_clnt_free_heap(clnt);
385     else
386         ndr_heap_destroy(clnt->heap);

388     clnt->heap = NULL;
389 }

391 /*
392  * Returns true if the handle is null.
393  * Otherwise returns false.
394  */
395 boolean_t
396 ndr_is_null_handle(mlsvd_handle_t *handle)
397 {
398     static ndr_hdid_t zero_handle;

400     if (handle == NULL || handle->clnt == NULL)
401         return (B_TRUE);

403     if (!memcmp(&handle->handle, &zero_handle, sizeof (ndr_hdid_t)))
404         return (B_TRUE);

406     return (B_FALSE);

```

```

407 }

409 /*
410  * Returns true if the handle is the top level bind handle.
411  * Otherwise returns false.
412  */
413 boolean_t
414 ndr_is_bind_handle(mlsvd_handle_t *handle)
415 {
416     return (handle->clnt->handle == &handle->handle);
417 }

419 /*
420  * Pass the client reference from parent to child.
421  */
422 void
423 ndr_inherit_handle(mlsvd_handle_t *child, mlsvd_handle_t *parent)
424 {
425     child->clnt = parent->clnt;
426     bcopy(&parent->svinfo, &child->svinfo, sizeof (svsvd_server_info_t));
427 }

429 void
430 ndr_rpc_status(mlsvd_handle_t *handle, int opnum, DWORD status)
431 {
432     ndr_service_t *svc;
433     char *name = "NDR RPC";
434     char *s = "unknown";

436     switch (NT_SC_SEVERITY(status)) {
437     case NT_STATUS_SEVERITY_SUCCESS:
438         s = "success";
439         break;
440     case NT_STATUS_SEVERITY_INFORMATIONAL:
441         s = "info";
442         break;
443     case NT_STATUS_SEVERITY_WARNING:
444         s = "warning";
445         break;
446     case NT_STATUS_SEVERITY_ERROR:
447         s = "error";
448         break;
449     }

451     if (handle) {
452         svc = handle->clnt->binding->service;
453         name = svc->name;
454     }

456     smb_tracef("%s[0x%02x]: %s: %s (0x%08x)",
457               name, opnum, s, xlate_nt_status(status), status);
458 }

460 /*
461  * The following functions provide the client callback interface.
462  * If the caller hasn't provided a heap, create one here.
463  */
464 static int
465 ndr_xa_init(ndr_client_t *clnt, ndr_xa_t *mxa)
466 {
467     ndr_stream_t *recv_nds = &mx->recv_nds;
468     ndr_stream_t *send_nds = &mx->send_nds;
469     ndr_heap_t *heap = clnt->heap;
470     int rc;

472     if (heap == NULL) {

```

```

473         if ((heap = ndr_heap_create()) == NULL)
474             return (-1);
475
476         clnt->heap = heap;
477     }
478
479     mxa->heap = heap;
480
481     rc = ndr_initialize(send_nds, 0, NDR_MODE_CALL_SEND, heap);
482     if (rc == 0)
483         rc = ndr_initialize(recv_nds, NDR_PDU_SIZE_HINT_DEFAULT,
484                             NDR_MODE_RETURN_RECV, heap);
485
486     if (rc != 0) {
487         ndr_destruct(&mx->recv_nds);
488         ndr_destruct(&mx->send_nds);
489         ndr_heap_destroy(mxa->heap);
490         mxa->heap = NULL;
491         clnt->heap = NULL;
492         return (-1);
493     }
494
495     if (clnt->nonnull)
496         NDS_SETF(send_nds, NDS_F_NONULL);
497
498     return (0);
499 }
500
501 /*
502  * This is the entry pointy for an RPC client call exchange with
503  * a server, which will result in an smbrdr SmbTransact request.
504  *
505  * SmbTransact should return the number of bytes received, which
506  * we record as the PDU size, or a negative error code.
507  */
508 static int
509 ndr_xa_exchange(ndr_client_t *clnt, ndr_xa_t *mx)
510 {
511     ndr_stream_t *recv_nds = &mx->recv_nds;
512     ndr_stream_t *send_nds = &mx->send_nds;
513     int err, more, nbytes;
514
515     nbytes = recv_nds->pdu_max_size;
516     err = smb_fh_xactnp(clnt->xa_fd,
517                       send_nds->pdu_size, (char *)send_nds->pdu_base_offset,
518                       &nbytes, (char *)recv_nds->pdu_base_offset, &more);
519     if (err) {
520         recv_nds->pdu_size = 0;
521         return (-1);
522     }
523
524     recv_nds->pdu_size = nbytes;
525     return (0);
526 }
527
528 /*
529  * This entry point will be invoked if the xa-exchange response contained
530  * only the first fragment of a multi-fragment response. The RPC client
531  * code will then make repeated xa-read requests to obtain the remaining
532  * fragments, which will result in smbrdr SmbReadX requests.
533  *
534  * SmbReadX should return the number of bytes received, in which case we
535  * expand the PDU size to include the received data, or a negative error
536  * code.
537  */
538 static int

```

```

539 ndr_xa_read(ndr_client_t *clnt, ndr_xa_t *mx)
540 {
541     ndr_stream_t *nds = &mx->recv_nds;
542     int len;
543     int nbytes;
544
545     if ((len = (nds->pdu_max_size - nds->pdu_size)) < 0)
546         return (-1);
547
548     nbytes = smb_fh_read(clnt->xa_fd, 0, len,
549                         (char *)nds->pdu_base_offset + nds->pdu_size);
550
551     if (nbytes < 0)
552         return (-1);
553
554     nds->pdu_size += nbytes;
555
556     if (nds->pdu_size > nds->pdu_max_size) {
557         nds->pdu_size = nds->pdu_max_size;
558         return (-1);
559     }
560
561     return (nbytes);
562 }
563
564 /*
565  * Preserve the heap so that the client application has access to data
566  * returned from the server after an RPC call.
567  */
568 static void
569 ndr_xa_preserve(ndr_client_t *clnt, ndr_xa_t *mx)
570 {
571     assert(clnt->heap == mx->heap);
572
573     clnt->heap_preserved = B_TRUE;
574     mx->heap = NULL;
575 }
576
577 /*
578  * Dispose of the transaction streams. If the heap has not been
579  * preserved, we can destroy it here.
580  */
581 static void
582 ndr_xa_destruct(ndr_client_t *clnt, ndr_xa_t *mx)
583 {
584     ndr_destruct(&mx->recv_nds);
585     ndr_destruct(&mx->send_nds);
586
587     if (!clnt->heap_preserved) {
588         ndr_heap_destroy(mx->heap);
589         mx->heap = NULL;
590         clnt->heap = NULL;
591     }
592 }
593
594 /*
595  * Dispose of a preserved heap.
596  */
597 static void
598 ndr_xa_release(ndr_client_t *clnt)
599 {
600     if (clnt->heap_preserved) {
601         ndr_heap_destroy(clnt->heap);
602         clnt->heap = NULL;
603         clnt->heap_preserved = B_FALSE;
604     }

```



```
605 }

608 /*
609  * Compare the time here with the remote time on the server
610  * and report clock skew.
611  */
612 void
613 ndr_srvsvc_timecheck(char *server, char *domain)
614 {
615     char                hostname[MAXHOSTNAMELEN];
616     struct timeval      dc_tv;
617     struct tm           dc_tm;
618     struct tm           *tm;
619     time_t              tnow;
620     time_t              tdiff;
621     int                 priority;

623     if (srvsvc_net_remote_tod(server, domain, &dc_tv, &dc_tm) < 0) {
624         syslog(LOG_DEBUG, "srvsvc_net_remote_tod failed");
625         return;
626     }

628     tnow = time(NULL);

630     if (tnow > dc_tv.tv_sec)
631         tdiff = (tnow - dc_tv.tv_sec) / SECSPERMIN;
632     else
633         tdiff = (dc_tv.tv_sec - tnow) / SECSPERMIN;

635     if (tdiff != 0) {
636         (void) strcpy(hostname, "localhost", MAXHOSTNAMELEN);
637         (void) gethostname(hostname, MAXHOSTNAMELEN);

639         priority = (tdiff > 2) ? LOG_NOTICE : LOG_DEBUG;
640         syslog(priority, "DC [%s] clock skew detected: %u minutes",
641             server, tdiff);

643         tm = gmtime(&dc_tv.tv_sec);
644         syslog(priority, "%-8s UTC: %s", server, asctime(tm));
645         tm = gmtime(&tnow);
646         syslog(priority, "%-8s UTC: %s", hostname, asctime(tm));
647     }
220 }
_____unchanged_portion_omitted_
```

new/usr/src/lib/smbdrv/libmlsvc/common/mlsvc_init.c

1

2780 Sun Mar 18 01:13:19 2018

new/usr/src/lib/smbdrv/libmlsvc/common/mlsvc_init.c

1575 untangle libmlrpc ... prel:

Move srvsvc_timecheck where it belongs

unchanged_portion_omitted

```
95 /*ARGSUSED*/
96 static void *
97 mlsvc_timecheck(void *arg)
98 {
99     smb_domainex_t di;

101     for (;;) {
102         (void) sleep(MLSVC_TIMECHECK_INTERVAL);

104         if (smb_config_get_secmode() != SMB_SECMODE_DOMAIN)
105             continue;

107         /* Avoid interfering with DC discovery. */
108         if (smb_ddiscover_wait() != 0)
109             continue;

111         if (!smb_domain_getinfo(&di))
112             continue;

114         srvsvc_timecheck(di.d_dci.dc_name,
114         ndr_srvsvc_timecheck(di.d_dci.dc_name,
115         di.d_primary.di_nbname);
116     }

118     /*NOTREACHED*/
119     return (NULL);
120 }
```

unchanged_portion_omitted

new/usr/src/lib/smbsrv/libmlsvc/common/mlsvc_util.c

1

13043 Sun Mar 18 01:13:20 2018

new/usr/src/lib/smbsrv/libmlsvc/common/mlsvc_util.c

1575 untangle libmlrpc ... (smbsrv)

unchanged portion omitted

```
429 /*
430  * A few more helper functions for RPC services.
431 */

433 /*
434  * Check whether or not the specified user has administrator privileges,
435  * i.e. is a member of Domain Admins or Administrators.
436  * Returns true if the user is an administrator, otherwise returns false.
437 */
438 boolean_t
439 ndr_is_admin(ndr_xa_t *xa)
440 {
441     smb_netuserinfo_t *ctx = xa->pipe->np_user;

443     return (ctx->ui_flags & SMB_ATF_ADMIN);
444 }

446 /*
447  * Check whether or not the specified user has power-user privileges,
448  * i.e. is a member of Domain Admins, Administrators or Power Users.
449  * This is typically required for operations such as managing shares.
450  * Returns true if the user is a power user, otherwise returns false.
451 */
452 boolean_t
453 ndr_is_poweruser(ndr_xa_t *xa)
454 {
455     smb_netuserinfo_t *ctx = xa->pipe->np_user;

457     return ((ctx->ui_flags & SMB_ATF_ADMIN) ||
458            (ctx->ui_flags & SMB_ATF_POWERUSER));
459 }

461 int32_t
462 ndr_native_os(ndr_xa_t *xa)
463 {
464     smb_netuserinfo_t *ctx = xa->pipe->np_user;

466     return (ctx->ui_native_os);
467 }
```

new/usr/src/lib/smbdrv/libmlsvc/common/msgsvc_svc.c

1

2466 Sun Mar 18 01:13:20 2018

new/usr/src/lib/smbdrv/libmlsvc/common/msgsvc_svc.c

1575 untangle libmlrpc .. (smbdrv)

```
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22 /*
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24  * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
25  */

27 /*
28  * Message Service
29  */

31 #include <syslog.h>
32 #include <stdlib.h>

34 #include <libmlrpc/libmlrpc.h>
35 #include <smbdrv/libmb.h>
36 #include <smbdrv/libmlrpc.h>
37 #include <smbdrv/libmlsvc.h>
38 #include <smbdrv/ndl/msgsvc.ndl>
39 #include <smbdrv/smbinfo.h>
40 #include <smbdrv/nmpipes.h>

41 static int msgsvcsend_NetrSendMessage(void *, ndr_xa_t *);

43 static ndr_stub_table_t msgsvcsend_stub_table[] = {
44     { msgsvcsend_NetrSendMessage, MSGSVCSEND_OPNUM_NetrSendMessage },
45     { 0 }
46 };
unchanged_portion_omitted
```

```

*****
16191 Sun Mar 18 01:13:20 2018
new/usr/src/lib/smbdrv/libmlsvc/common/netr_auth.c
1575 untangle libmlrpc ... pre2:
Get rid of ndr_rpc_server_{info,os}
*****
_____unchanged_portion_omitted_____

194 uint32_t netr_server_auth2_flags =
195     NETR_NEGOTIATE_BASE_FLAGS |
196     NETR_NEGOTIATE_STRONGKEY_FLAG;

198 /*
199  * netr_server_authenticate2
200  */
201 static int
202 netr_server_authenticate2(mlsvc_handle_t *netr_handle, netr_info_t *netr_info)
203 {
204     struct netr_ServerAuthenticate2 arg;
205     /* sizeof netr_info->hostname, + 1 for the '$' */
206     char account_name[(NETBIOS_NAME_SZ * 2) + 1];
207     int opnum;
208     int rc;

210     bzero(&arg, sizeof (struct netr_ServerAuthenticate2));
211     opnum = NETR_OPNUM_ServerAuthenticate2;

213     (void) snprintf(account_name, sizeof (account_name), "%s$",
214                    netr_info->hostname);

216     smb_tracef("server=[%s] account_name=[%s] hostname=[%s]\n",
217               netr_info->server, account_name, netr_info->hostname);

219     arg.servername = (unsigned char *)netr_info->server;
220     arg.account_name = (unsigned char *)account_name;
221     arg.account_type = NETR_WKSTA_TRUST_ACCOUNT_TYPE;
222     arg.hostname = (unsigned char *)netr_info->hostname;
223     arg.negotiate_flags = netr_server_auth2_flags;
219     arg.negotiate_flags = NETR_NEGOTIATE_BASE_FLAGS;

225     if (arg.negotiate_flags & NETR_NEGOTIATE_STRONGKEY_FLAG) {
221     if (ndr_rpc_server_os(netr_handle) == NATIVE_OS_WIN2000) {
222         arg.negotiate_flags |= NETR_NEGOTIATE_STRONGKEY_FLAG;
226         if (netr_gen_skey128(netr_info) != SMBAUTH_SUCCESS)
227             return (-1);
228     } else {
229         if (netr_gen_skey64(netr_info) != SMBAUTH_SUCCESS)
230             return (-1);
231     }

233     if (netr_gen_credentials(netr_info->session_key.key,
234                             &netr_info->client_challenge, 0,
235                             &netr_info->client_credential) != SMBAUTH_SUCCESS) {
236         return (-1);
237     }

239     if (netr_gen_credentials(netr_info->session_key.key,
240                             &netr_info->server_challenge, 0,
241                             &netr_info->server_credential) != SMBAUTH_SUCCESS) {
242         return (-1);
243     }

245     (void) memcpy(&arg.client_credential, &netr_info->client_credential,
246                 sizeof (struct netr_credential));

248     if (ndr_rpc_call(netr_handle, opnum, &arg) != 0)

```

```

249         return (-1);

251     if (arg.status != 0) {
252         ndr_rpc_status(netr_handle, opnum, arg.status);
253         ndr_rpc_release(netr_handle);
254         return (-1);
255     }

257     rc = memcmp(&netr_info->server_credential, &arg.server_credential,
258               sizeof (struct netr_credential));

260     ndr_rpc_release(netr_handle);
261     return (rc);
262 }
_____unchanged_portion_omitted_____

```

new/usr/src/lib/smbsrv/libmlsvc/common/netr_logon.c

1

```
*****
23250 Sun Mar 18 01:13:20 2018
new/usr/src/lib/smbsrv/libmlsvc/common/netr_logon.c
1575 untangle libmlrpc .. (smbsrv)
*****
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20 */

22 /*
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24  * Copyright 2015 Nexenta Systems, Inc. All rights reserved.
25  */

27 /*
28  * NETR SamLogon and SamLogoff RPC client functions.
29  */

31 #include <stdio.h>
32 #include <strings.h>
33 #include <stdlib.h>
34 #include <time.h>
35 #include <alloca.h>
36 #include <unistd.h>
37 #include <netdb.h>
38 #include <thread.h>

40 #include <libmlrpc/libmlrpc.h>
41 #include <smbsrv/libmb.h>
42 #include <smbsrv/libmlrpc.h>
43 #include <smbsrv/libmlsvc.h>
44 #include <smbsrv/ndl/netlogon.ndl>
45 #include <smbsrv/netrauth.h>
46 #include <smbsrv/smbinfo.h>
47 #include <smbsrv/smb_token.h>
48 #include <mlsvc.h>

49 #define NETLOGON_ATTEMPTS 2

51 static uint32_t netlogon_logon(smb_logon_t *, smb_token_t *);
52 static uint32_t netr_server_samlogon(mlsvc_handle_t *, netr_info_t *, char *,
53     smb_logon_t *, smb_token_t *);
54 static void netr_invalidate_chain(void);
55 static void netr_interactive_samlogon(netr_info_t *, smb_logon_t *,
56     struct netr_logon_info1 *);
57 static void netr_network_samlogon(ndr_heap_t *, netr_info_t *,
58     smb_logon_t *, struct netr_logon_info2 *);
59 static void netr_setup_identity(ndr_heap_t *, smb_logon_t *,
60     netr_logon_id_t *);
```

new/usr/src/lib/smbsrv/libmlsvc/common/netr_logon.c

2

```
61 static boolean_t netr_isadmin(struct netr_validation_info3 *);
62 static uint32_t netr_setup_domain_groups(struct netr_validation_info3 *,
63     smb_ids_t *);
64 static uint32_t netr_setup_token_info3(struct netr_validation_info3 *,
65     smb_token_t *);
66 static uint32_t netr_setup_token_wingrps(struct netr_validation_info3 *,
67     smb_token_t *);

69 /*
70  * Shared with netr_auth.c
71  */
72 extern netr_info_t netr_global_info;

74 static mutex_t netlogon_mutex;
75 static cond_t netlogon_cv;
76 static boolean_t netlogon_busy = B_FALSE;
77 static boolean_t netlogon_abort = B_FALSE;

79 /*
80  * Helper for Kerberos authentication
81  */
82 uint32_t
83 smb_decode_krb5_pac(smb_token_t *token, char *data, uint_t len)
84 {
85     struct krb5_validation_info info;
86     ndr_buf_t *nbuf;
87     uint32_t status = NT_STATUS_NO_MEMORY;
88     int rc;

90     bzero(&info, sizeof (info));

92     /* Need to keep this until we're done with &info */
93     nbuf = ndr_buf_init(&TYPEINFO(netr_interface));
94     if (nbuf == NULL)
95         goto out;

97     rc = ndr_buf_decode(nbuf, NDR_PTYPE_PAC,
98         NETR_OPNUM_decode_krb5_pac, data, len, &info);
99     if (rc != NDR_DRC_OK) {
100         status = RPC_NT_PROTOCOL_ERROR;
101         goto out;
102     }

104     status = netr_setup_token_info3(&info.info3, token);

106     /* Deal with the "resource groups"? */

109 out:
110     if (nbuf != NULL)
111         ndr_buf_fini(nbuf);

113     return (status);
114 }
unchanged_portion_omitted
```

```

*****
26509 Sun Mar 18 01:13:20 2018
new/usr/src/lib/smbdrv/libmlsvc/common/samr_clnt.c
1575 untangle libmlrpc ... (smbdrv)
*****
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22 /*
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24  * Copyright 2014 Nexenta Systems, Inc. All rights reserved.
25  */

27 /*
28  * Security Accounts Manager RPC (SAMR) client-side interface.
29  *
30  * The SAM is a hierarchical database:
31  * - If you want to talk to the SAM you need a SAM handle.
32  * - If you want to work with a domain, use the SAM handle.
33  *   to obtain a domain handle.
34  * - Use domain handles to obtain user handles etc.
35  *
36  * Be careful about returning null handles to the application. Use of a
37  * null handle may crash the domain controller if you attempt to use it.
38  */

40 #include <stdio.h>
41 #include <strings.h>
42 #include <stdlib.h>
43 #include <unistd.h>
44 #include <netdb.h>
45 #include <sys/param.h>

47 #include <libmlrpc/libmlrpc.h>
48 #include <smbdrv/libmb.h>
48 #include <smbdrv/libmlrpc.h>
49 #include <smbdrv/libmlsvc.h>
50 #include <smbdrv/smbinfo.h>
51 #include <smbdrv/ntaccess.h>
52 #include <smbdrv/smb_sid.h>
53 #include <samlib.h>

55 static DWORD samr_connect2(char *, char *, char *, DWORD, mlsvc_handle_t *);
56 static DWORD samr_connect4(char *, char *, char *, DWORD, mlsvc_handle_t *);
57 static DWORD samr_connect5(char *, char *, char *, DWORD, mlsvc_handle_t *);

59 typedef DWORD (*samr_connop_t)(char *, char *, char *, DWORD,
60     mlsvc_handle_t *);

```

```

62 static int samr_setup_user_info(WORD, struct samr_QueryUserInfo *,
63     union samr_user_info *);

65 /*
66  * samr_open
67  *
68  * Wrapper round samr_connect to ensure that we connect using the server
69  * and domain. We default to the resource domain if the caller doesn't
70  * supply a server name and a domain name.
71  *
72  * If username argument is NULL, an anonymous connection will be established.
73  * Otherwise, an authenticated connection will be established.
74  *
75  * On success 0 is returned. Otherwise a -ve error code.
76  */
77 DWORD
78 samr_open(char *server, char *domain, char *username, DWORD access_mask,
79     mlsvc_handle_t *samr_handle)
80 {
81     smb_domainex_t di;
82     DWORD status;

84     if (server == NULL || domain == NULL) {
85         if (!smb_domain_getinfo(&di))
86             return (NT_STATUS_INTERNAL_ERROR);
87         server = di.d_dci.dc_name;
88         domain = di.d_primary.di_nbname;
89     }

91     if (username == NULL)
92         username = MLSVC_ANON_USER;

94     status = samr_connect(server, domain, username, access_mask,
95         samr_handle);

97     return (status);
98 }
_____unchanged_portion_omitted_

```

new/usr/src/lib/smbdrv/libmlsvc/common/samr_svc.c

1

51366 Sun Mar 18 01:13:20 2018

new/usr/src/lib/smbdrv/libmlsvc/common/samr_svc.c

1575 untangle libmlrpc .. (smbdrv)

```
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24 * Copyright 2015 Nexenta Systems, Inc. All rights reserved.
25 */

27 /*
28 * Security Accounts Manager RPC (SAMR) server-side interface.
29 *
30 * The SAM is a hierarchical database:
31 * - If you want to talk to the SAM you need a SAM handle.
32 * - If you want to work with a domain, use the SAM handle.
33 *   to obtain a domain handle.
34 * - Use domain handles to obtain user handles etc.
35 */

37 #include <strings.h>
38 #include <unistd.h>
39 #include <netdb.h>
40 #include <assert.h>
41 #include <grp.h>
42 #include <libmlrpc/libmlrpc.h>
43 #include <smbdrv/libmb.h>
44 #include <smbdrv/libmlrpc.h>
45 #include <smbdrv/libmlsvc.h>
46 #include <smbdrv/smbinfo.h>
47 #include <smbdrv/nmpipes.h>
48 #include <smbdrv/ndl/samrpc.ndl>
49 #include <samlib.h>

50 /*
51 * The keys associated with the various handles dispensed by the SAMR
52 * server. These keys can be used to validate client activity.
53 * These values are never passed over the wire so security shouldn't
54 * be an issue.
55 */
56 typedef enum {
57     SAMR_KEY_NULL = 0,
58     SAMR_KEY_CONNECT,
59     SAMR_KEY_DOMAIN,
60     SAMR_KEY_USER,
```

new/usr/src/lib/smbdrv/libmlsvc/common/samr_svc.c

2

```
61     SAMR_KEY_GROUP,
62     SAMR_KEY_ALIAS
63 } samr_key_t;
_____unchanged_portion_omitted_
```


new/usr/src/lib/smbdrv/libmlsvc/common/spoolss_svc.c

1

```
*****
31151 Sun Mar 18 01:13:20 2018
new/usr/src/lib/smbdrv/libmlsvc/common/spoolss_svc.c
1575 untangle libmlrpc .. (smbdrv)
*****
```

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23 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
24 */

26 /*
27 * Printing and Spooling RPC service.
28 */
29 #include <sys/types.h>
30 #include <sys/stat.h>
31 #include <sys/utsname.h>
32 #include <sys/atomic.h>
33 #include <unistd.h>
34 #include <stdlib.h>
35 #include <strings.h>
36 #include <fcntl.h>
37 #include <errno.h>
38 #include <libmlrpc/libmlrpc.h>
39 #include <smbdrv/libmb.h>
40 #include <smbdrv/libmlrpc.h>
41 #include <smbdrv/libmlsvc.h>
42 #include <smbdrv/ndl/spoolss.ndl>
43 #include <smbdrv/ndl/winreg.ndl>
44 #include <smb/nterror.h>
45 #include <smbdrv/smbinfo.h>
46 #include <smbdrv/nmpipes.h>
47 #include <mlsvc.h>

49 #ifdef HAVE_CUPS

51 #define SPOOLSS_PRINTER      "Postscript"

53 typedef struct smb_spool {
54     list_t      sp_list;
55     int         sp_cnt;
56     rwlock_t   sp_rwl;
57     int         sp_initialized;
58 } smb_spool_t;
unchanged_portion_omitted
```

```

*****
13246 Sun Mar 18 01:13:21 2018
new/usr/src/lib/smbsrv/libmlsvc/common/srvsvc_clnt.c
1575 untangle libmlrpc ... pre2:
Get rid of ndr_rpc_server_{info,os}
1575 untangle libmlrpc ... prel:
Move srvsvc_timecheck where it belongs
*****
1 /*
2 * CDDL HEADER START
3 *
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15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23 * Copyright (c) 2009, 2010, Oracle and/or its affiliates. All rights reserved.
24 * Copyright 2015 Nexenta Systems, Inc. All rights reserved.
25 */

27 /*
28 * Server Service (srvsvc) client side RPC library interface. The
29 * srvsvc interface allows a client to query a server for information
30 * on shares, sessions, connections and files on the server. Some
31 * functions are available via anonymous IPC while others require
32 * administrator privilege. Also, some functions return NT status
33 * values while others return Win32 errors codes.
34 */

36 #include <sys/errno.h>
37 #include <sys/tzfile.h>
38 #include <stdio.h>
39 #include <time.h>
40 #include <strings.h>
41 #include <unistd.h>

43 #include <smbsrv/libmb.h>
44 #include <smbsrv/libmlsvc.h>
45 #include <smbsrv/smbinfo.h>
46 #include <smbsrv/ndl/srvsvc.ndl>

48 /*
49 * Information level for NetShareGetInfo.
50 */
51 DWORD srvsvc_info_level = 1;

53 /*
54 * Bind to the the SRVSVC.
55 *
56 * If username argument is NULL, an anonymous connection will be established.
57 * Otherwise, an authenticated connection will be established.
58 */

```

```

59 static int
60 srvsvc_open(char *server, char *domain, char *username, mlsvc_handle_t *handle)
61 {
62     smb_domainex_t di;

64     if (server == NULL || domain == NULL) {
65         if (!smb_domain_getinfo(&di))
66             return (-1);

68         server = di.d_dci.dc_name;
69         domain = di.d_primary.di_nbname;
70     }

72     if (username == NULL)
73         username = MLSVC_ANON_USER;

75     if (ndr_rpc_bind(handle, server, domain, username, "SRVSVC") != 0)
76         return (-1);

78     return (0);
79 }

_____ unchanged portion omitted _____

352 /*
353 * Compare the time here with the remote time on the server
354 * and report clock skew.
355 * Windows 95+ and Windows NT4.0 both report the version as 4.0.
356 * Windows 2000+ reports the version as 5.x.
357 */
358 void
359 srvsvc_timecheck(char *server, char *domain)
360 {
361     int
362     srvsvc_net_server_getinfo(char *server, char *domain,
363     srvsvc_server_info_t *svinfo)
364     {
365         char
366         struct timeval
367         struct tm
368         struct tm
369         time_t
370         time_t
371         int
372         mlsvc_handle_t handle;
373         struct mslm_NetServerGetInfo arg;
374         struct mslm_SERVER_INFO_101 *sv101;
375         int len, opnum, rc;
376         char user[SMB_USERNAME_MAXLEN];

377         if (srvsvc_net_remote_tod(server, domain, &dc_tv, &dc_tm) < 0) {
378             syslog(LOG_DEBUG, "srvsvc_net_remote_tod failed");
379             return;
380         }
381         smb_ipc_get_user(user, SMB_USERNAME_MAXLEN);

382         tnow = time(NULL);
383         if (srvsvc_open(server, domain, user, &handle) != 0)
384             return (-1);

385         if (tnow > dc_tv.tv_sec)
386             tdiff = (tnow - dc_tv.tv_sec) / SECSPERMIN;
387         else
388             tdiff = (dc_tv.tv_sec - tnow) / SECSPERMIN;
389         opnum = SRVSVC_OPNUM_NetServerGetInfo;
390         bzero(&arg, sizeof (arg));

391         if (tdiff != 0) {

```

```

380         (void) strcpy(hostname, "localhost", MAXHOSTNAMELEN);
381         (void) gethostname(hostname, MAXHOSTNAMELEN);
382         len = strlen(server) + 4;
383         arg.servername = ndr_rpc_malloc(&handle, len);
384         if (arg.servername == NULL)
385             return (-1);
386
387         priority = (tdiff > 2) ? LOG_NOTICE : LOG_DEBUG;
388         syslog(priority, "DC [%s] clock skew detected: %u minutes",
389             server, tdiff);
390         (void) snprintf((char *)arg.servername, len, "\\\\"%s", server);
391         arg.level = 101;
392
393         tm = gmtime(&dc_tv.tv_sec);
394         syslog(priority, "%-8s UTC: %s", server, asctime(tm));
395         tm = gmtime(&now);
396         syslog(priority, "%-8s UTC: %s", hostname, asctime(tm));
397         rc = ndr_rpc_call(&handle, opnum, &arg);
398         if ((rc != 0) || (arg.status != 0)) {
399             srvsvc_close(&handle);
400             return (-1);
401         }
402
403         sv101 = arg.result.bufptr.bufptr101;
404
405         bzero(svinfo, sizeof(srvsvc_server_info_t));
406         svinfo->sv_platform_id = sv101->sv101_platform_id;
407         svinfo->sv_version_major = sv101->sv101_version_major;
408         svinfo->sv_version_minor = sv101->sv101_version_minor;
409         svinfo->sv_type = sv101->sv101_type;
410         if (sv101->sv101_name)
411             svinfo->sv_name = strdup((char *)sv101->sv101_name);
412         if (sv101->sv101_comment)
413             svinfo->sv_comment = strdup((char *)sv101->sv101_comment);
414
415         if (svinfo->sv_type & SV_TYPE_WFW)
416             svinfo->sv_os = NATIVE_OS_WIN95;
417         if (svinfo->sv_type & SV_TYPE_WINDOWS)
418             svinfo->sv_os = NATIVE_OS_WIN95;
419         if ((svinfo->sv_type & SV_TYPE_NT) ||
420             (svinfo->sv_type & SV_TYPE_SERVER_NT))
421             svinfo->sv_os = NATIVE_OS_WINNT;
422         if (svinfo->sv_version_major > 4)
423             svinfo->sv_os = NATIVE_OS_WIN2000;
424
425         srvsvc_close(&handle);
426         return (0);
427     }
428 }
429
430 unchanged_portion_omitted
431
432 /*
433 * This is a client side routine for NetRemoteTOD, which gets the time
434 * and date from a remote system. The time information is returned in
435 * the timeval and tm.
436 *
437 * typedef struct _TIME_OF_DAY_INFO {
438 *     DWORD tod_elapsedt; // seconds since 00:00:00 January 1 1970 GMT
439 *     DWORD tod_msecs; // arbitrary milliseconds (since reset)
440 *     DWORD tod_hours; // current hour [0-23]
441 *     DWORD tod_mins; // current minute [0-59]
442 *     DWORD tod_secs; // current second [0-59]
443 *     DWORD tod_hunds; // current hundredth (0.01) second [0-99]
444 *     LONG tod_timezone; // time zone of the server
445 *     DWORD tod_tinterval; // clock tick time interval
446 *     DWORD tod_day; // day of the month [1-31]
447 *     DWORD tod_month; // month of the year [1-12]

```

```

448 *     DWORD tod_year; // current year
449 *     DWORD tod_weekday; // day of the week since sunday [0-6]
450 * } TIME_OF_DAY_INFO;
451 *
452 * The time zone of the server is calculated in minutes from Greenwich
453 * Mean Time (GMT). For time zones west of Greenwich, the value is
454 * positive; for time zones east of Greenwich, the value is negative.
455 * A value of -1 indicates that the time zone is undefined.
456 *
457 * The clock tick value represents a resolution of one ten-thousandth
458 * of (0.0001) second.
459 */
460 int
461 srvsvc_net_remote_tod(char *server, char *domain, struct timeval *tv,
462     struct tm *tm)
463 {
464     struct mslm_NetRemoteTOD arg;
465     struct mslm_TIME_OF_DAY_INFO *tod;
466     mlsvc_handle_t handle;
467     int rc;
468     int opnum;
469     int len;
470     char user[SMB_USERNAME_MAXLEN];
471
472     smb_ipc_get_user(user, SMB_USERNAME_MAXLEN);
473
474     rc = srvsvc_open(server, domain, user, &handle);
475     if (rc != 0)
476         return (-1);
477
478     opnum = SRVSVC_OPNUM_NetRemoteTOD;
479     bzero(&arg, sizeof(struct mslm_NetRemoteTOD));
480
481     len = strlen(server) + 4;
482     arg.servername = ndr_rpc_malloc(&handle, len);
483     if (arg.servername == NULL) {
484         srvsvc_close(&handle);
485         return (-1);
486     }
487
488     (void) snprintf((char *)arg.servername, len, "\\\\"%s", server);
489
490     rc = ndr_rpc_call(&handle, opnum, &arg);
491     if ((rc != 0) || (arg.status != 0)) {
492         srvsvc_close(&handle);
493         return (-1);
494     }
495
496     /*
497     * We're assigning milliseconds to microseconds
498     * here but the value's not really relevant.
499     */
500     tod = arg.bufptr;
501
502     if (tv) {
503         tv->tv_sec = tod->tod_elapsedt;
504         tv->tv_usec = tod->tod_msecs;
505     }
506
507     if (tm) {
508         tm->tm_sec = tod->tod_secs;
509         tm->tm_min = tod->tod_mins;
510         tm->tm_hour = tod->tod_hours;
511         tm->tm_mday = tod->tod_day;
512         tm->tm_mon = tod->tod_month - 1;
513         tm->tm_year = tod->tod_year - 1900;

```

```
523         tm->tm_wday = tod->tod_weekday;
524     }

526     srvsvc_close(&handle);
527     return (0);
546 }

548 void
549 srvsvc_net_test(char *server, char *domain, char *netname)
550 {
551     smb_domainex_t di;
552     srvsvc_server_info_t svinfo;

554     (void) smb_tracef("%s %s %s", server, domain, netname);

556     if (smb_domain_getinfo(&di)) {
557         server = di.d_dci.dc_name;
558         domain = di.d_primary.di_nbname;
559     }

561     if (srvsvc_net_server_getinfo(server, domain, &svinfo) == 0) {
562         smb_tracef("NetServerGetInfo: %s %s (%d.%d) id=%d type=0x%08x",
563                 svinfo.sv_name ? svinfo.sv_name : "NULL",
564                 svinfo.sv_comment ? svinfo.sv_comment : "NULL",
565                 svinfo.sv_version_major, svinfo.sv_version_minor,
566                 svinfo.sv_platform_id, svinfo.sv_type);

568         free(svinfo.sv_name);
569         free(svinfo.sv_comment);
570     }

572     (void) srvsvc_net_share_get_info(server, domain, netname);
573 #if 0
574     /*
575     * The NetSessionEnum server-side definition was updated.
576     * Disabled until the client-side has been updated.
577     */
578     (void) srvsvc_net_session_enum(server, domain, netname);
579 #endif
580     (void) srvsvc_net_connect_enum(server, domain, netname, 0);
581     (void) srvsvc_net_connect_enum(server, domain, netname, 1);
528 }

    unchanged portion omitted
```

```

*****
30062 Sun Mar 18 01:13:21 2018
new/usr/src/lib/smb/rv/lib/smb/common/lib/smb.h
1575 untangle libmlrpc .. (smb/rv)
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
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16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */

22 /*
23  * Copyright (c) 2007, 2010, Oracle and/or its affiliates. All rights reserved.
24  * Copyright 2015 Nexenta Systems, Inc. All rights reserved.
25  */

27 #ifndef _LIBSMB_H
28 #define _LIBSMB_H

30 #ifdef __cplusplus
31 extern "C" {
32 #endif

34 #include <sys/types.h>
35 #include <sys/list.h>
36 #include <sys/avl.h>
37 #include <arpa/inet.h>
38 #include <net/if.h> /* LIFNAMSIZ */
39 #include <netdb.h>
40 #include <stdlib.h>
41 #include <libscf.h>
42 #include <libshare.h>
43 #include <uuid/uuid.h>
44 #include <synch.h>
45 #include <stdarg.h>

47 #include <smb/nterror.h>
48 #include <smb/ntstatus.h>
49 #include <smb/wintypes.h>

51 #include <smb/rv/string.h>
52 #include <smb/rv/smb_idmap.h>
53 #include <smb/rv/netbios.h>
54 #include <smb/rv/smb_share.h>
51 #include <smb/nterror.h>
52 #include <smb/ntstatus.h>
55 #include <smb/rv/smb_door.h>
56 #include <smb/rv/alloc.h>
57 #include <smb/rv/hash_table.h>
58 #include <smb/rv/msgbuf.h>
57 #include <smb/rv/wintypes.h>

```

```

59 #include <smb/rv/smb_xdr.h>
60 #include <smb/rv/smbinfo.h>
61 #include <smb/rv/ntifs.h>

63 #define SMB_VARSMB_DIR "/var/smb"
64 #define SMB_VARRUN_DIR "/var/run/smb"
65 #define SMB_CCACHE_FILE "ccache"
66 #define SMB_CCACHE_PATH SMB_VARRUN_DIR "/" SMB_CCACHE_FILE

69 /* Max value length of all SMB properties */
70 #define MAX_VALUE_BUFLen 512

72 #define SMBD_FMRI_PREFIX "network/smb/server"
73 #define SMBD_DEFAULT_INSTANCE_FMRI "svc:/network/smb/server:default"
74 #define SMBD_PG_NAME "smbd"
75 #define SMBD_PROTECTED_PG_NAME "read"
76 #define SMBD_EXEC_PG_NAME "exec"

78 #define SMBD_SMF_OK 0
79 #define SMBD_SMF_NO_MEMORY 1 /* no memory for data structures */
80 #define SMBD_SMF_SYSTEM_ERR 2 /* system error, use errno */
81 #define SMBD_SMF_NO_PERMISSION 3 /* no permission for operation */
82 #define SMBD_SMF_INVALID_ARG 4

84 #define SCH_STATE_UNINIT 0
85 #define SCH_STATE_INITIALIZING 1
86 #define SCH_STATE_INIT 2

88 typedef struct smb_scfhandle {
89     scf_handle_t *scf_handle;
90     int scf_state;
91     scf_service_t *scf_service;
92     scf_scope_t *scf_scope;
93     scf_transaction_t *scf_trans;
94     scf_transaction_entry_t *scf_entry;
95     scf_propertygroup_t *scf_pg;
96     scf_instance_t *scf_instance;
97     scf_iter_t *scf_inst_iter;
98     scf_iter_t *scf_pg_iter;
99 } smb_scfhandle_t;

```

unchanged portion omitted

new/usr/src/lib/smb/rv/lib/smb/common/smb_doorclnt.c

1

```
*****
12116 Sun Mar 18 01:13:21 2018
new/usr/src/lib/smb/rv/lib/smb/common/smb_doorclnt.c
1575 untangle libmlrpc ... (smb/rv)
*****
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17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright (c) 2007, 2010, Oracle and/or its affiliates. All rights reserved.
23 * Copyright 2015 Nexenta Systems, Inc. All rights reserved.
24 */

26 #include <assert.h>
27 #include <syslog.h>
28 #include <door.h>
29 #include <fcntl.h>
30 #include <string.h>
31 #include <strings.h>
32 #include <stdlib.h>
33 #include <unistd.h>
34 #include <errno.h>
35 #include <sys/mman.h>
36 #include <smb/wintypes.h>
37 #include <smb/rv/lib/smb.h>
38 #include <smb/rv/wintypes.h>
39 #include <smb/rv/smb_door.h>

40 static int smb_door_call(uint32_t, void *, xdrproc_t, void *, xdrproc_t);
41 static int smb_door_call_private(int, smb_doorarg_t *);
42 static int smb_door_encode(smb_doorarg_t *, uint32_t);
43 static int smb_door_decode(smb_doorarg_t *);
44 static void smb_door_sethdr(smb_doorhdr_t *, uint32_t, uint32_t);
45 static boolean_t smb_door_chkhdr(smb_doorarg_t *, smb_doorhdr_t *);
46 static void smb_door_free(door_arg_t *arg);

48 /*
49  * Given a SID, make a door call to get the associated name.
50  *
51  * Returns 0 if the door call is successful, otherwise -1.
52  *
53  * If 0 is returned, the lookup result will be available in a_status.
54  * NT_STATUS_SUCCESS The SID was mapped to a name.
55  * NT_STATUS_NONE_MAPPED The SID could not be mapped to a name.
56  */
57 int
58 smb_lookup_sid(const char *sid, lsa_account_t *acct)
59 {
60     int rc;
```

new/usr/src/lib/smb/rv/lib/smb/common/smb_doorclnt.c

2

```
62     assert((sid != NULL) && (acct != NULL));

64     bzero(acct, sizeof (lsa_account_t));
65     (void) strncpy(acct->a_sid, sid, SMB_SID_STRSZ);

67     rc = smb_door_call(SMB_DR_LOOKUP_SID, acct, lsa_account_xdr,
68                       acct, lsa_account_xdr);

70     if (rc != 0)
71         syslog(LOG_DEBUG, "smb_lookup_sid: %m");
72     return (rc);
73 }
unchanged_portion_omitted
```

new/usr/src/pkg/manifests/service-file-system-smb.mf

1

```
*****
4426 Sun Mar 18 01:13:21 2018
new/usr/src/pkg/manifests/service-file-system-smb.mf
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...
1575 untangle libmlrpc ... (packaging)
*****
1 #
2 # CDDL HEADER START
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20 #
21 #
22 #
23 # Copyright (c) 2010, Oracle and/or its affiliates. All rights reserved.
24 # Copyright 2014 Nexenta Systems, Inc. All rights reserved.
25 #
26 #
27 set name=pkg.fmri value=pkg:/service/file-system/smb@$(PKGVERS)
28 set name=pkg.description value="SMB Server libraries and commands"
29 set name=pkg.summary value="SMB Server"
30 set name=info.classification \
31   value="org.opensolaris.category.2008:System/File System"
32 set name=variant.arch value=$(ARCH)
33 dir path=lib
34 dir path=lib/svc
35 dir path=lib/svc/manifest group=sys
36 dir path=lib/svc/manifest/network group=sys
37 dir path=lib/svc/manifest/network/smb group=sys
38 dir path=lib/svc/method
39 dir path=usr group=sys
40 dir path=usr/kernel group=sys
41 dir path=usr/kernel/drv group=sys
42 dir path=usr/kernel/drv/$(ARCH64) group=sys
43 dir path=usr/kernel/kmdb group=sys
44 dir path=usr/kernel/kmdb/$(ARCH64) group=sys
45 dir path=usr/lib
46 dir path=usr/lib/fs group=sys
47 dir path=usr/lib/fs/smb group=sys
48 dir path=usr/lib/fs/smb/$(ARCH64) group=sys
49 dir path=usr/lib/mdb group=sys
50 dir path=usr/lib/mdb/kvm group=sys
51 dir path=usr/lib/mdb/kvm/$(ARCH64) group=sys
52 dir path=usr/lib/reparse
53 dir path=usr/lib/security
54 dir path=usr/lib/smbsrv
55 dir path=usr/lib/smbsrv/dtrace
56 dir path=usr/sbin
57 dir path=usr/share/man
58 dir path=usr/share/man/man1m
59 dir path=usr/share/man/man4
```

new/usr/src/pkg/manifests/service-file-system-smb.mf

2

```
60 dir path=usr/share/man/man5
61 dir path=var group=sys
62 dir path=var/smb group=sys
63 dir path=var/smb/cvol group=sys
64 dir path=var/smb/cvol/windows group=sys
65 dir path=var/smb/cvol/windows/system32 group=sys
66 dir path=var/smb/cvol/windows/system32/vss group=sys
67 dir path=var/svc group=sys
68 driver name=smbsrv perms="* 0640 root sys"
69 file path=lib/svc/manifest/network/smb/server.xml group=sys mode=0444
70 file path=lib/svc/method/svc-smbd mode=0555
71 file path=usr/kernel/drv/$(ARCH64)/smbsrv group=sys
72 file path=usr/kernel/drv/smbsrv.conf group=sys
73 file path=usr/kernel/kmdb/$(ARCH64)/smbsrv group=sys mode=0555
74 file path=usr/lib/fs/smb/$(ARCH64)/libshare_smb.so.1
75 file path=usr/lib/fs/smb/libshare_smb.so.1
76 file path=usr/lib/mdb/kvm/$(ARCH64)/smbsrv.so group=sys mode=0555
77 file path=usr/lib/reparse/libreparse_smb.so.1
78 file path=usr/lib/security/pam_smb_passwd.so.1
79 file path=usr/lib/smbsrv/dtrace/smbd-all.d mode=0555
80 file path=usr/lib/smbsrv/dtrace/smbd-authsvc.d mode=0555
81 file path=usr/lib/smbsrv/dtrace/smbd-doorsvc.d mode=0555
82 file path=usr/lib/smbsrv/dtrace/smbd-pipesvc.d mode=0555
83 file path=usr/lib/smbsrv/dtrace/smbnode.d mode=0555
84 file path=usr/lib/smbsrv/dtrace/smbsrv.d mode=0555
85 file path=usr/lib/smbsrv/dtrace/smbvfs.d mode=0555
86 file path=usr/lib/smbsrv/libmlrpc.so.1
87 file path=usr/lib/smbsrv/libmlsvc.so.1
88 file path=usr/lib/smbsrv/libmbns.so.1
89 file path=usr/lib/smbsrv/smbd mode=0555
90 file path=usr/sbin/smbadm mode=0555
91 file path=usr/sbin/smbstat mode=0555
92 file path=usr/share/man/man1m/smbadm.1m
93 file path=usr/share/man/man1m/smbd.1m
94 file path=usr/share/man/man1m/smbstat.1m
95 file path=usr/share/man/man4/smb.4
96 file path=usr/share/man/man4/smbautohome.4
97 file path=usr/share/man/man5/pam_smb_passwd.5
98 file path=var/smb/cvol/windows/system32/eventlog.dll mode=0755
99 file path=var/smb/smbpasswd group=sys mode=0400 \
100   original_name=SUNWsmbs:var/smb/smbpasswd preserve=true
101 legacy pkg=SUNWsmbskr desc="SMB Server kernel root components" \
102   name="SMB Server (Kernel)"
103 legacy pkg=SUNWsmbsr desc="SMB Server root components" \
104   name="SMB Server (Root)"
105 legacy pkg=SUNWsmbsu desc="SMB Server libraries and commands" \
106   name="SMB Server (Usr)"
107 license cr_Sun license=cr_Sun
108 license lic_CDDL license=lic_CDDL
109 link path=usr/lib/reparse/libreparse_smb.so target=libreparse_smb.so.1
110 link path=usr/lib/security/pam_smb_passwd.so target=pam_smb_passwd.so.1
111 link path=usr/lib/smbsrv/libmlrpc.so target=libmlrpc.so.1
112 link path=usr/lib/smbsrv/libmlsvc.so target=libmlsvc.so.1
113 link path=usr/lib/smbsrv/libmbns.so target=libmbns.so.1
114 link path=usr/lib/smbsrv/libmbns.so target=libmbns.so.1
115 link path=usr/lib/smbsrv/libmbns.so target=libmbns.so.1
```

new/usr/src/pkg/manifests/system-file-system-smb.mf

1

```
*****
5015 Sun Mar 18 01:13:21 2018
new/usr/src/pkg/manifests/system-file-system-smb.mf
3328 smbutil view doesn't work with Win2008 and later
requires 1575 untangle libmlrpc ...
*****
1 #
2 # CDDL HEADER START
3 #
4 # The contents of this file are subject to the terms of the
5 # Common Development and Distribution License (the "License").
6 # You may not use this file except in compliance with the License.
7 #
8 # You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9 # or http://www.opensolaris.org/os/licensing.
10 # See the License for the specific language governing permissions
11 # and limitations under the License.
12 #
13 # When distributing Covered Code, include this CDDL HEADER in each
14 # file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 # If applicable, add the following below this CDDL HEADER, with the
16 # fields enclosed by brackets "[]" replaced with your own identifying
17 # information: Portions Copyright [yyyy] [name of copyright owner]
18 #
19 # CDDL HEADER END
20 #
21 #
22 #
23 # Copyright (c) 2010, Oracle and/or its affiliates. All rights reserved.
24 # Copyright 2012 Nexenta Systems, Inc. All rights reserved.
25 #
26 #
27 set name=pkg.fmri value=pkg:/system/file-system/smb@$(PKGVERS)
28 set name=pkg.description value="SMB/CIFS File System client support"
29 set name=pkg.summary value="SMB/CIFS File System client support"
30 set name=info.classification \
31     value="org.opensolaris.category.2008:System/File System"
32 set name=variant.arch value=$(ARCH)
33 dir path=lib
34 dir path=lib/svc
35 dir path=lib/svc/manifest group=sys
36 dir path=lib/svc/manifest/network group=sys
37 dir path=lib/svc/manifest/network/smb group=sys
38 dir path=lib/svc/method
39 dir path=usr group=sys
40 dir path=usr/bin
41 dir path=usr/kernel group=sys
42 dir path=usr/kernel/drv group=sys
43 dir path=usr/kernel/drv/$(ARCH64) group=sys
44 dir path=usr/kernel/fs group=sys
45 dir path=usr/kernel/fs/$(ARCH64) group=sys
46 dir path=usr/kernel/kmdb group=sys
47 dir path=usr/kernel/kmdb/$(ARCH64) group=sys
48 dir path=usr/lib
49 dir path=usr/lib/$(ARCH64)
50 dir path=usr/lib/fs group=sys
51 dir path=usr/lib/fs/smbfs group=sys
52 dir path=usr/lib/fs/smbfs/$(ARCH64) group=sys
53 dir path=usr/lib/mdb group=sys
54 dir path=usr/lib/mdb/kvm group=sys
55 dir path=usr/lib/mdb/kvm/$(ARCH64) group=sys
56 dir path=usr/lib/security
57 dir path=usr/lib/security/$(ARCH64)
58 dir path=usr/lib/smbfs
59 dir path=usr/share/man
60 dir path=usr/share/man/man1
```

new/usr/src/pkg/manifests/system-file-system-smb.mf

2

```
61 dir path=usr/share/man/man1m
62 dir path=usr/share/man/man4
63 dir path=usr/share/man/man5
64 dir path=usr/share/man/man7fs
65 driver name=nsmb perms="* 0666 root sys"
66 file path=lib/svc/manifest/network/smb/client.xml group=sys mode=0444
67 file path=lib/svc/method/smb-client mode=0555
68 file path=usr/bin/smbutil mode=0555
69 file path=usr/kernel/drv/$(ARCH64)/nsmb group=sys
70 file path=usr/kernel/drv/nsmb.conf group=sys
71 file path=usr/kernel/fs/$(ARCH64)/smbfs group=sys mode=0755
72 file path=usr/kernel/kmdb/$(ARCH64)/nsmb group=sys mode=0555
73 file path=usr/kernel/kmdb/$(ARCH64)/smbfs group=sys mode=0555
74 file path=usr/lib/$(ARCH64)/libsmbfs.so.1
75 file path=usr/lib/fs/smbfs/$(ARCH64)/libshare_smbfs.so.1
76 file path=usr/lib/fs/smbfs/dfshares mode=0555
77 file path=usr/lib/fs/smbfs/libshare_smbfs.so.1
78 file path=usr/lib/fs/smbfs/mount mode=4555
79 file path=usr/lib/fs/smbfs/share mode=0555
80 file path=usr/lib/fs/smbfs/umount mode=4555
81 file path=usr/lib/fs/smbfs/unshare mode=0555
82 file path=usr/lib/libmlrpc.so.2
83 file path=usr/lib/libsmbfs.so.1
84 file path=usr/lib/mdb/kvm/$(ARCH64)/nsmb.so mode=0555
85 file path=usr/lib/mdb/kvm/$(ARCH64)/smbfs.so mode=0555
86 file path=usr/lib/security/$(ARCH64)/pam_smbfs_login.so.1
87 file path=usr/lib/security/pam_smbfs_login.so.1
88 file path=usr/lib/smbfs/smbiod mode=0555
89 file path=usr/lib/smbfs/smbiod-svc mode=0555
90 file path=usr/share/man/man1/smbutil.1
91 file path=usr/share/man/man1m/mount_smbfs.1m
92 file path=usr/share/man/man1m/smbiod.1m
93 file path=usr/share/man/man4/nsmbrc.4
94 file path=usr/share/man/man5/pam_smbfs_login.5
95 file path=usr/share/man/man7fs/smbfs.7fs
96 legacy pkg=SUNWsmbskr desc="SMB/CIFS File System client support (Kernel)" \
97     name="SMB/CIFS File System client support (Kernel)"
98 legacy pkg=SUNWsmbsfr desc="SMB/CIFS File System client support (Root)" \
99     name="SMB/CIFS File System client support (Root)"
100 legacy pkg=SUNWsmbsfsu desc="SMB/CIFS File System client support (Usr)" \
101     name="SMB/CIFS File System client support (Usr)"
102 license cr_Sun license=cr_Sun
103 license lic_CDDL license=lic_CDDL
104 license usr/src/lib/libsmbfs/smb/THIRDPARTYLICENSE.apple \
105     license=usr/src/lib/libsmbfs/smb/THIRDPARTYLICENSE.apple
106 license usr/src/lib/libsmbfs/smb/THIRDPARTYLICENSE.boris_popov \
107     license=usr/src/lib/libsmbfs/smb/THIRDPARTYLICENSE.boris_popov
108 license usr/src/lib/libsmbfs/smb/THIRDPARTYLICENSE.bsd4 \
109     license=usr/src/lib/libsmbfs/smb/THIRDPARTYLICENSE.bsd4
110 license usr/src/lib/libsmbfs/smb/THIRDPARTYLICENSE.microsoft \
111     license=usr/src/lib/libsmbfs/smb/THIRDPARTYLICENSE.microsoft
112 link path=usr/lib/security/$(ARCH64)/pam_smbfs_login.so \
113     target=pam_smbfs_login.so.1
114 link path=usr/lib/security/pam_smbfs_login.so target=pam_smbfs_login.so.1
115 link path=usr/share/man/man1m/umount_smbfs.1m target=mount_smbfs.1m
116 # libsmbfs uses iconv_open() which requires this at run-time.
117 depend fmri=system/library/iconv/utf-8 type=require
```


new/usr/src/tools/ndrgen/ndrgen.sh

1

```
*****
2675 Sun Mar 18 01:13:21 2018
new/usr/src/tools/ndrgen/ndrgen.sh
1575 untangle libmlrpc ... (libmlrpc)
*****
1 #!/bin/ksh -p
2 #
3 # CDDL HEADER START
4 #
5 # The contents of this file are subject to the terms of the
6 # Common Development and Distribution License (the "License").
7 # You may not use this file except in compliance with the License.
8 #
9 # You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
10 # or http://www.opensolaris.org/os/licensing.
11 # See the License for the specific language governing permissions
12 # and limitations under the License.
13 #
14 # When distributing Covered Code, include this CDDL HEADER in each
15 # file and include the License file at usr/src/OPENSOLARIS.LICENSE.
16 # If applicable, add the following below this CDDL HEADER, with the
17 # fields enclosed by brackets "[]" replaced with your own identifying
18 # information: Portions Copyright [yyyy] [name of copyright owner]
19 #
20 # CDDL HEADER END
21 #
22 #
23 #
24 # Copyright 2009 Sun Microsystems, Inc. All rights reserved.
25 # Use is subject to license terms.
26 #
27 # Copyright 2013 Nexenta Systems, Inc. All rights reserved.
28 #
29 #
30 # This is a wrapper script around the ndrgen compiler (ndrgen1).
31 # CC must be defined in the environment or on the command line.
32
33 NDRPROG="${0}1"
34 NDRPROG="${0%*/}ndrgen1"
35 INCDIR=${ROOT}/usr/include/smsbrv
36
37 # Note: most *.ndl files require an ANSI-compatible cpp,
38 # so we can NOT use /usr/lib/cpp or /usr/ccs/lib/cpp
39 # Wish there was an easier way to get an ANSI cpp.
40 # CPP=${CC} -E
41 CPPFLAGS="-DNDRGEN"
42 V_FLAG=
43
44 PROGRAMME='basename $0'
45
46 ndrgen_usage()
47 {
48     if [[ $1 != "" ]] ; then
49         print "$PROGRAMME: ERROR: $1"
50     fi
51 }
52
53 echo "usage: $PROGRAMME [options] file.ndl [file.ndl]..."
54 echo "  options: -Y cc-path -Ddefine -Iinclude"
55 echo "usage: $PROGRAMME [-Y cpp-path] file [file]..."
56 exit 1
57 }
58
59 # Process the input ndl file ($1) generating C code on stdout.
60 process()
61 # Copy header text from the input ndl file to the generated ndr C file.
62 ndrgen_copy_header()
```

new/usr/src/tools/ndrgen/ndrgen.sh

2

```
56 {
57     ndl_file=$1
58     ndr_file=$2
59
60     # Put the standard top matter
61     #
62     # Want the include directive to have just
63     # include "file.ndl" (no path) so...
64     inc_ndl='basename $1'
65     cat - << EOF
66 /*
67 * Please do not edit this file.
68 * It was generated using ndrgen.
69 */
70
71 #include <strings.h>
72 #include <libmlrpc/ndr.h>
73 #include "$inc_ndl"
74 EOF
75
76 # Put optional custom top matter
77 nawk 'BEGIN { copy=0; }
78     /\*\* NDRGEN_HEADER_BEGIN \*\*/ { copy=1; next; }
79     /\*\* NDRGEN_HEADER_END \*\*/ { copy=0; next; }
80     /\* { if (copy==1) print; }' $1
81
82 # now the real ndrgen output
83 [ -n "$V_FLAG" ] &&
84 echo "$CPP $CPPFLAGS $1 | $NDRPROG" >&2
85 $CPP $CPPFLAGS $1 | $NDRPROG
86 ./ { if (copy==1) print; }' < $ndl_file > $ndr_file
87 }
88
89 if [[ $# -lt 1 ]] ; then
90     ndrgen_usage
91 fi
92
93 while getopts "D:I:Y:V" FLAG
94 do
95     case $FLAG in
96         D|I) CPPFLAGS="$CPPFLAGS -${FLAG}${OPTARG}";;
97         Y) CPP="$OPTARG";;
98         V) V_FLAG="V";;
99         *) ndrgen_usage;;
100        Y) CC_FLAG="y"
101            ;;
102        *) ndrgen_usage
103            ;;
104    esac
105 done
106 shift $((OPTIND - 1))
107
108 if [[ $# -lt 1 ]] ; then
109     ndrgen_usage
110 fi
111 if [[ $CC_FLAG = "y" ]] ; then
112     shift $((OPTIND - 1))
113
114     if [[ $# -lt 1 ]] ; then
115         ndrgen_usage "C pre-processor path is missing"
116     else
117         CC=$1
118         shift $((OPTIND - 1))
119     fi
120 fi
```

```
81         # Check for cw being invoked with -_cc or -_gcc
82         if [[ $1 = "-_cc" || $1 = "-_gcc" ]]; then
83             CC_ARG=$1
84             shift $(( $OPTIND - 1 ))
85         fi
86     fi
100 fi

102 if [ ! -x $CPP ] ; then
103     ndrngen_usage "cannot run $CPP"
89 if [[ $CC = "" ]]; then
90     ndrngen_usage "C pre-processor is not defined"
104 fi

93 if [ ! -f $CC ] || [ ! -x $CC ] ; then
94     ndrngen_usage "cannot run $CC"
95 fi

106 for i
107 do
108     if [[ ! -r $i ]]; then
109         print "$PROGNAME: ERROR: cannot read $i"
110         exit 1
111     fi

113     base=`basename $i .ndl`
114     process $i > ${base}_ndr.c || {
115         echo "ndrngen error";
116         rm ${base}_ndr.c;
117     }
104     BASENAME=`basename $i .ndl`
105     TMP_NAME=$BASENAME.ndl.c

107     cp $i $TMP_NAME

109     if $CC $CC_ARG -E -D_a64 -D_EXTENSIONS__ -D_FILE_OFFSET_BITS=64 \
110         -I. -I${INCDIR} -I${INCDIR}/ndl -DNDRGEN $TMP_NAME | \
111         $NDRPROG > $BASENAME.raw
112     then
113         touch ${BASENAME}_ndr.c
114         ndrngen_copy_header $i ${BASENAME}_ndr.c

116         cat - << EOF >> ${BASENAME}_ndr.c
117 /*
118  * Please do not edit this file.
119  * It was generated using ndrngen.
120  */

122 #include <strings.h>
123 #include <smbstrv/ndr.h>
124 #include <smbstrv/ndl/${BASENAME}.ndl>
125 EOF

127         cat $BASENAME.raw >> ${BASENAME}_ndr.c

129         rm -f $BASENAME.raw
130         rm -f $TMP_NAME
131     else
132         rm -f $BASENAME.raw
133         rm -f $TMP_NAME
134         exit 1
135     fi
118 done
```

```

*****
6639 Sun Mar 18 01:13:21 2018
new/usr/src/tools/quick/make-smbclnt
1575 untangle libmlrpc ... (libmlrpc)
*****
1 #!/bin/ksh
2 #
3 # This file and its contents are supplied under the terms of the
4 # Common Development and Distribution License ("CDDL"), version 1.0.
5 # You may only use this file in accordance with the terms of version
6 # 1.0 of the CDDL.
7 #
8 # A full copy of the text of the CDDL should have accompanied this
9 # source. A copy of the CDDL is also available via the Internet at
10 # http://www.illumos.org/license/CDDL.
11 #
12 #
13 #
14 # Copyright 2014 Nexenta Systems, Inc. All rights reserved.
15 #
16 #
17 # Use distributed make (dmake) by default.
18 make=${MAKE:-dmake}
19 #
20 CLOSED_IS_PRESENT=no
21 export CLOSED_IS_PRESENT
22 #
23 # Do this if you want to use dbx or gdb
24 # export SOURCEDEBUG=yes
25 #
26 [ -n "$SRC" ] || {
27   echo "SRC not set. Run 'ws' or 'bldenv' first."
28   exit 1
29 }
30 #
31 cpu=`uname -p`
32 case $cpu in
33 i386)
34     x=intel
35     kmdb_arch="amd64"
36     mdb_arch="ia32 amd64"
37     arch64=amd64
38     ;;
39 sparc)
40     x=sparc
41     kmdb_arch=v9
42     mdb_arch="v7 v9"
43     arch64=sparcv9
44     ;;
45 *) echo "Huh?" ; exit 1;;
46 esac
47 #
48 #####
49 #
50 build_tools() {
51   test -f $SRC/tools/proto/root_i386-nd/opt/onbld/bin/genoffsets ||
52     (cd $SRC/tools && $make install)
53   (cd $SRC/common/mapfiles; $make install)
54 }
55 #
56 clobber_tools() {
57   (cd $SRC/tools && $make clobber)
58   (cd $SRC/common/mapfiles; $make clobber)
59 }
60 #
61 #####

```

```

63 do_hdrs() {
64 #
65 targ=$1
66 if [ "$targ" = clobber ]
67 then
68   (cd $SRC/uts && $make -k clobber_h)
69   (cd $SRC/head && $make clobber)
70 fi
71 #
72 if [ "$targ" = install ]
73 then
74   targ=install_h
75 #
76   # Just the parts of "make sgs" we need, and
77   # skip them if they appear to be done.
78   # ... stuff under $SRC
79   test -f $SRC/uts/common/sys/priv_names.h ||
80     (cd $SRC/uts && $make -k all_h)
81 #
82   test -f $SRC/head/rpcsvc/nispasswd.h ||
83     (cd $SRC/head && $make -k install_h)
84 #
85   # ... stuff under $ROOT (proto area)
86   test -d $ROOT/usr/include/sys ||
87     (cd $SRC && $make rootdirs)
88   test -f $ROOT/usr/include/sys/types.h ||
89     (cd $SRC/uts && $make -k install_h)
90   test -f $ROOT/usr/include/rpcsvc/daemon_utils.h ||
91     (cd $SRC/head && $make install_h)
92 #
93   # always update the netsmb headers to be safe
94   (cd $SRC/uts/common/sys && $make -k install_h)
95 #
96 fi
97 #
98 # Need some library headers too...
99 for lib in \
100 libcryptoutil \
101 libpam \
102 libsec \
103 libshare \
104 libsmbfs \
105 passwdutil
106 do
107   (cd $SRC/lib/$lib && $make $targ)
108 done
109 }
110 #
111 #####
112 #
113 do_kern() {
114   case $1 in
115 lint) targ=modlintlib ;;
116 *) targ=$1 ;;
117 esac
118   ( unset SOURCEDEBUG ;
119     (cd $SRC/uts/$x/nsmb && $make $targ) ;
120     (cd $SRC/uts/$x/smbfs && $make $targ) )
121 }
122 #
123 #####
124 #
125 # Note libl builds prerequisite libraries not delivered by the
126 # tar file we create below. To accelerate clean/install, we
127 # skip these on clean (but still nuke them for clobber)

```

```

129 do_lib1() {
130 :
131 }

133 # lib2 builds stuff we include in the tar file,
134 # or that we don't mind rebuilding after clean.

136 do_lib2() {

138 (cd $SRC/lib/libmbfs && $make $1)
139 [ "$1" = install ] &&
140 (cd $SRC/lib/libmbfs && $make _msg)
141 (cd $SRC/lib/libmlrpc && $make $1)
142 (cd $SRC/lib/libshare && $make $1 PLUGINS=smbfs)
143 (cd $SRC/lib/passwdutil && $make $1)
144 (cd $SRC/lib/pam_modules/smbfs && $make $1)

146 }

148 #####

150 do_cmds() {

152 case $1 in
153 install)
154 # mount programs need fslib.o
155 (cd $SRC/cmd/fs.d && $make fslib.o)
156 (cd $SRC/cmd/fs.d/smbclnt && $make $1 catalog)
157 ;;
158 clean|clobber)
159 (cd $SRC/cmd/fs.d/smbclnt && $make $1)
160 (cd $SRC/cmd/fs.d && $make ${1}_local)
161 ;;
162 esac

164 # Build the MDB modules, WITH the linktest
165 (cd $SRC/cmd/mdb/tools && $make $1)

167 # kmdb_arch is 64-bit only
168 for a in $kmdb_arch
169 do
170 case $1 in
171 install|lint)
172 (cd $SRC/cmd/mdb/$x/$a/kmdb &&
173 $make kmdb_modlinktest.o )
174 ;;
175 clean|clobber)
176 (cd $SRC/cmd/mdb/$x/$a/kmdb &&
177 $make -k $1 )
178 ;;
179 esac

181 (cd $SRC/cmd/mdb/$x/$a/nsmb &&
182 $make $1 KMDB_LINKTEST_ENABLE= )
183 (cd $SRC/cmd/mdb/$x/$a/smbfs &&
184 $make $1 KMDB_LINKTEST_ENABLE= )
185 done
186 }

189 #####
190 # This builds $SRC/TAGS (and cscope.files) in a helpful order.

192 do_tags() {
193 (cd $SRC ;

```

```

194 find uts/common/sys -name '*.ch]' -print |sort
195 find uts/common/net -name '*.ch]' -print |sort
196 find uts/common/netinet -name '*.ch]' -print |sort
197 find uts/common/smb -name '*.ch]' -print |sort
198 find uts/common/netsmb -name '*.ch]' -print |sort
199 find uts/common/fs/smbclnt -name '*.ch]' -print |sort
200 find head -name '*.h' -print |sort
201 find lib/libmbfs -name '*.ch]' -print |sort
202 find cmd/fs.d/smbclnt -name '*.ch]' -print |sort
203 find common/smbclnt -name '*.ch]' -print |sort
204 ) > $SRC/cscope.files

206 (cd $SRC ;
207 exctags -e --langmap=c:+.ndl -h ndl -L - < cscope.files
208 cscope -b )
209 }

211 #####
212 # This creates a tarfile one can use to update a test machine.

214 do_tar() {
215 git_rev=`git rev-parse --short=8 HEAD`
216 files="
217 lib/svc/manifest/network/smb/client.xml
218 lib/svc/method/smb-client
219 opt/smbcl-tests/tests/srvenum
220 opt/smbcl-tests/tests/srvinfo
221 opt/smbcl-tests/tests/tconn
222 usr/bin/smbutil
223 usr/kernel/drv/$arch64/nsmb
224 usr/kernel/fs/$arch64/smbfs
225 usr/kernel/kmdb/$arch64/nsmb
226 usr/kernel/kmdb/$arch64/smbfs
227 usr/lib/$arch64/libmbfs.so.1
228 usr/lib/fs/smbfs/$arch64/libshare_smbfs.so.1
229 usr/lib/fs/smbfs/chacl
230 usr/lib/fs/smbfs/dfshares
231 usr/lib/fs/smbfs/libshare_smbfs.so.1
232 usr/lib/fs/smbfs/lsacl
233 usr/lib/fs/smbfs/mount
234 usr/lib/fs/smbfs/share
235 usr/lib/fs/smbfs/umount
236 usr/lib/fs/smbfs/unshare
237 usr/lib/libmlrpc.so.1
238 usr/lib/libmbfs.so.1
239 usr/lib/mdb/kvm/$arch64/nsmb.so
240 usr/lib/mdb/kvm/$arch64/smbfs.so
241 usr/lib/mdb/kvm/nsmb.so
242 usr/lib/mdb/kvm/smbfs.so
243 usr/lib/security/$arch64/pam_smbfs_login.so.1
244 usr/lib/security/pam_smbfs_login.so.1
245 usr/lib/smbfs/smbiod
246 usr/lib/smbfs/smbiod-svc
247 "

249 (cd $ROOT && tar cfj ../../smbclnt-${git_rev}.tar.bz2 $files)
250 }

252 #####

254 if [ "$1" = "" ]; then
255 set '?' # force usage
256 fi

258 set -x

```

```
260 for arg
261 do
262   case "$arg" in
263     install)
264       build_tools
265       set -e
266       do_hdrs $arg
267       do_kern $arg
268       do_lib1 $arg
269       do_lib2 $arg
270       do_cmds $arg
271       ;;
272     lint)
273       do_kern $arg
274       do_lib1 $arg
275       do_lib2 $arg
276       do_cmds $arg
277       ;;
278     clean)
279       # intentionally skip: lib1, hdrs, tools
280       do_cmds $arg
281       do_lib2 $arg
282       do_kern $arg
283       ;;
284     clobber)
285       do_cmds $arg
286       do_lib2 $arg
287       do_lib1 $arg
288       do_kern $arg
289       do_hdrs $arg
290       clobber_tools
291       ;;
292     tags)
293       do_tags
294       ;;
295     tar)
296       do_tar
297       ;;
298     *)
299       echo "Usage: $0 {install|lint|clean|clobber|tags|tar}";
300       exit 1;
301       ;;
302   esac
303 done
```

```
new/usr/src/tools/quick/make-smbsrv
```

1

```
*****  
7631 Sun Mar 18 01:13:21 2018  
new/usr/src/tools/quick/make-smbsrv  
1575 untangle libmlrpc .. (smbsrv)  
*****  
_____unchanged_portion_omitted_____
```

```
274 #####  
275 # This creates a tarfile one can use to update a test machine.
```

```
277 do_tar() {  
278     git_rev='git rev-parse --short=8 HEAD'  
279     files="  
280 lib/svc/manifest/network/smb/server.xml  
281 usr/kernel/drv/$arch64/smbsrv  
282 usr/kernel/kmdb/$arch64/smbsrv  
283 usr/lib/fs/smb/$arch64/libshare_smb.so.1  
284 usr/lib/fs/smb/libshare_smb.so.1  
285 usr/lib/libsmvfs.so.1  
286 usr/lib/mdb/kvm/$arch64/smbsrv.so  
287 usr/lib/reparse/libreparse_smb.so.1  
288 usr/lib/security/pam_smb_passwd.so.1  
289 usr/lib/smbsrv/dtrace  
290 usr/lib/libmlrpc.so.1  
290 usr/lib/smbsrv/libmlrpc.so.1  
291 usr/lib/smbsrv/libmlsvc.so.1  
292 usr/lib/smbsrv/libsmns.so.1  
293 usr/lib/smbsrv/libsmns.so.1  
294 usr/lib/smbsrv/smbd  
295 usr/sbin/devfsadm  
296 usr/sbin/smbadm  
297 usr/sbin/smbstat  
298 "  
  
300     (cd $ROOT && tar cfj ../../smbsrv-${git_rev}.tar.bz2 $files)  
301 }  
_____unchanged_portion_omitted_____
```

new/usr/src/uts/common/smb/Makefile

1

```
*****
1299 Sun Mar 18 01:13:22 2018
new/usr/src/uts/common/smb/Makefile
1575 untangle libmlrpc .. (libmlrpc)
*****
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20 #
21 #
22 #
23 # Copyright (c) 2010, Oracle and/or its affiliates. All rights reserved.
24 # Copyright 2013 Nexenta Systems, Inc. All rights reserved.
25 #
26 #
27 include ../../../Makefile.master
28 #
29 HDRS= \
30     doserror.h      \
31     lmerr.h         \
32     nterror.h       \
33     ntstatus.h      \
34     wintypes.h
35     ntstatus.h
36 #
37 ROOTDIR= $(ROOT)/usr/include/smb
38 Roothdrs= $(HDRS:%=$(ROOTDIR)/%)
39 CHECKHDRS= $(HDRS:%.h=%.check)
40 #
41 $(ROOTDIR)/%: %
42     $(INS.file)
43 #
44 $(ROOTDIR):
45     $(INS.dir)
46 #
47 .KEEP_STATE:
48 #
49 .PARALLEL: $(CHECKHDRS)
50 #
51 install_h: $(ROOTDIR) $(Roothdrs)
52 #
53 check: $(CHECKHDRS)
```

new/usr/src/uts/common/smb/wintypes.h

1

```
*****
1756 Sun Mar 18 01:13:22 2018
new/usr/src/uts/common/smb/wintypes.h
1575 untangle libmlrpc ... (libmlrpc)
*****
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27  */

29 #ifndef _SMB_WINTYPES_H
30 #define _SMB_WINTYPES_H
26 #ifndef _SMBSRV_WINTYPES_H
27 #define _SMBSRV_WINTYPES_H

32 #include <sys/types.h>

34 /*
35  * Standard win32 types and definitions.
36  */

38 #ifdef __cplusplus
39 extern "C" {
40 #endif

42 #ifndef UNSIGNED_TYPES_DEFINED
43 #define UNSIGNED_TYPES_DEFINED

45 typedef uint8_t BYTE;
46 typedef uint16_t WORD;
47 typedef uint32_t DWORD;
48 typedef DWORD ntstatus_t;

50 /* pointers to those types */
51 typedef BYTE *LPBYTE;
52 typedef WORD *LPWORD;
53 typedef DWORD *LPDWORD;

55 /* Note: Internally, this is always a UTF-8 string. */
45 typedef uint32_t ntstatus_t;
56 typedef uint8_t *LPTSTR;
47 typedef uint8_t *LPBYTE;
48 typedef uint16_t *LPWORD;
```

new/usr/src/uts/common/smb/wintypes.h

2

```
49 typedef uint32_t *LPDWORD;

58 #endif /* UNSIGNED_TYPES_DEFINED */

61 /* XXX This does not really belong here... */
62 #ifndef ANY_SIZE_ARRAY
63 #define ANY_SIZE_ARRAY 1
64 #endif /* ANY_SIZE_ARRAY */

66 /* CONTEXT_HANDLE now in ndrtypes.ndl */
58 /*
59  * Opaque context handle.
60  */
61 #ifndef CONTEXT_HANDLE
62 #define CONTEXT_HANDLE(NAME) \
63     struct NAME { \
64         DWORD data1; \
65         DWORD data2; \
66         WORD data3[2]; \
67         BYTE data4[8]; \
68     };
69     typedef struct NAME
70 #endif /* CONTEXT_HANDLE */

68 #ifdef __cplusplus
69 }
70 #endif

72 #endif /* _SMB_WINTYPES_H */
77 #endif /* _SMBSRV_WINTYPES_H */
```



```

*****
2118 Sun Mar 18 01:13:22 2018
new/usr/src/uts/common/smbsrv/Makefile
1575 untangle libmlrpc ... (smbsrv)
*****
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24 #

26 include ../../../../Makefile.master

28 HDRS=   alloc.h           \
29         cp_unicode.h      \
30         cp_usascii.h      \
31         hash_table.h      \
32         mac_cifs.h        \
33         mailslot.h        \
34         mbuf.h            \
35         msgbuf.h          \
36         ndr.h             \
36         netbios.h         \
37         netrauth.h        \
38         nmpipes.h         \
39         ntaccess.h        \
40         ntifs.h           \
41         ntlocale.h        \
42         smb_sid.h         \
43         smb.h             \
44         smb_door.h        \
45         smb_dfs.h         \
46         smb_fsops.h       \
47         smb_idmap.h       \
48         smb_inet.h        \
49         smb_ioctl.h       \
50         smb_kproto.h      \
51         smb_kstat.h       \
52         smb_ktypes.h      \
53         smb_privilege.h   \
54         smb_share.h       \
55         smb_signing.h     \
56         smb_token.h       \
57         smb_vops.h        \
58         smb_xdr.h         \
59         smbinfo.h         \
60         smb2.h            \

```

```

61         smb2_kproto.h     \
62         string.h          \
63         svrapi.h          \
64         winioctl.h       \
65         winsvc.h          \
66         winsvc.h         \
67         wintypes.h       \

67 ND LHDRS= dssetup.ndl    \
68           eventlog.ndl   \
69           llsrc.ndl      \
70           lsarpc.ndl     \
71           msgsvc.ndl     \
74           ndrtypes.ndl   \
72           netdfs.ndl     \
73           netlogon.ndl   \
77           rpcpdu.ndl    \
74           samrpc.ndl    \
75           security.ndl   \
76           spoolss.ndl    \
77           srvsvc.ndl     \
78           svcctl.ndl     \
79           winreg.ndl     \

81 ROOTDIR= $(ROOT)/usr/include/smbsrv
82 ND LDIR= $(ROOTDIR)/ndl
83 ROOTHDRS= $(HDRS:%=$(ROOTDIR)/%) $(ND LHDRS:%=$(ROOTDIR)/ndl/%)
84 CHECKHDRS= $(HDRS:%.h=%.check)

86 $(ROOTDIR)/%: %
87     $(INS.file)

89 $(ND LDIR)/%: ndl/%
90     $(INS.file)

92 $(ROOTDIR) $(ND LDIR):
93     $(INS.dir)

95 .KEEP_STATE:

97 .PARALLEL: $(CHECKHDRS)

99 install_h: $(ROOTDIR) $(ND LDIR) $(ROOTHDRS)

101 check: $(CHECKHDRS)

```

new/usr/src/uts/common/smbdrv/nd1/dssetup.nd1

1

```
*****
4604 Sun Mar 18 01:13:22 2018
new/usr/src/uts/common/smbdrv/nd1/dssetup.nd1
1575 untangle libmlrpc .. (smbdrv)
*****
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26 */

28 #ifndef _DSSETUP_NDL_
29 #define _DSSETUP_NDL_

31 /*
32  * Active Directory Service Setup
33  *
34  * Originally this interface contained a number of operations, as listed
35  * below, but due to a buffer overflow security issue, all operations
36  * except DsRoleGetPrimaryDomainInfo have been deprecated (MS04-011).
37  */

39 #include <libmlrpc/ndrtypes.nd1>
37 #include "ndrtypes.nd1"

42 #define DSSETUP_OPNUM_DsRoleGetPrimaryDomainInfo 0x00
43 #define DSSETUP_OPNUM_DsRoleDnsNameToFlatName 0x01
44 #define DSSETUP_OPNUM_DsRoleDcAsDc 0x02
45 #define DSSETUP_OPNUM_DsRoleDcAsReplica 0x03
46 #define DSSETUP_OPNUM_DsRoleDemoteDc 0x04
47 #define DSSETUP_OPNUM_DsRoleGetDcOperationProgress 0x05
48 #define DSSETUP_OPNUM_DsRoleGetDcOperationResults 0x06
49 #define DSSETUP_OPNUM_DsRoleCancel 0x07
50 #define DSSETUP_OPNUM_DsRoleServerSaveStateForUpgrade 0x08
51 #define DSSETUP_OPNUM_DsRoleUpgradeDownlevelServer 0x09
52 #define DSSETUP_OPNUM_DsRoleAbortDownlevelServerUpgrade 0x0a

54 /*
55  * DS roles
56  */
57 #define DS_ROLE_STANDALONE_WORKSTATION 0
58 #define DS_ROLE_MEMBER_WORKSTATION 1
59 #define DS_ROLE_STANDALONE_SERVER 2
60 #define DS_ROLE_MEMBER_SERVER 3
```

new/usr/src/uts/common/smbdrv/nd1/dssetup.nd1

2

```
61 #define DS_ROLE_BACKUP_DC 4
62 #define DS_ROLE_PRIMARY_DC 5

64 /*
65  * DS role flags
66  */
67 #define DS_ROLE_PRIMARY_DS_RUNNING 0x00000001
68 #define DS_ROLE_PRIMARY_DS_MIXED_MODE 0x00000002
69 #define DS_ROLE_UPGRADE_IN_PROGRESS 0x00000004
70 #define DS_ROLE_PRIMARY_DOMAIN_GUID_PRESENT 0x01000000

72 /*
73  * DS role upgrade
74  */
75 #define DS_ROLE_NOT_UPGRADING 0
76 #define DS_ROLE_UPGRADING 1

78 /*
79  * DS role previous
80  */
81 #define DS_ROLE_PREVIOUS_UNKNOWN 0
82 #define DS_ROLE_PREVIOUS_PRIMARY 1
83 #define DS_ROLE_PREVIOUS_BACKUP 2

85 /*
86  * DS role state
87  */
88 #define DS_ROLE_OP_IDLE 0
89 #define DS_ROLE_OP_ACTIVE 1
90 #define DS_ROLE_OP_NEEDS_REBOOT 2

92 /*
93  * DS role information levels
94  */
95 #define DS_ROLE_BASIC_INFORMATION 1
96 #define DS_ROLE_UPGRADE_STATUS 2
97 #define DS_ROLE_OP_STATUS 3

99 struct dssetup_uid {
100     DWORD    data1;
101     WORD     data2;
102     WORD     data3;
103     BYTE     data4[8];
104 };
_____unchanged_portion_omitted_____
```

new/usr/src/uts/common/smbdrv/ndl/eventlog.ndl

1

4589 Sun Mar 18 01:13:22 2018

new/usr/src/uts/common/smbdrv/ndl/eventlog.ndl

1575 untangle libmlrpc .. (smbdrv)

```
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25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

28 #ifndef _MLSVC_LOGR_NDL_
29 #define _MLSVC_LOGR_NDL_

31 /*
32 *****
33 *
34 * Event log RPC (EVENTLOG) interface definition.
35 *
36 *****
37 */

39 #include <libmlrpc/ndrtypes.ndl>
37 #include "ndrtypes.ndl"

41 #define LOGR_OPNUM_EventLogClose          0x02
42 #define LOGR_OPNUM_EventLogQueryCount    0x04
43 #define LOGR_OPNUM_EventLogGetOldestRec  0x05
44 #define LOGR_OPNUM_EventLogOpen          0x07
45 #define LOGR_OPNUM_EventLogRead          0x0A

47 #define LOGR_MAXENTRYLEN                  800

50 CONTEXT_HANDLE(logr_handle) logr_handle_t;

52 struct logr_string {
53     WORD    length;
54     WORD    allosize;
55     LPTSTR  str;
56 };
_____unchanged_portion_omitted_
```

new/usr/src/uts/common/smbdrv/ndl/llsrpc.ndl

1

```
*****
2561 Sun Mar 18 01:13:22 2018
new/usr/src/uts/common/smbdrv/ndl/llsrpc.ndl
1575 untangle libmlrpc .. (smbdrv)
*****
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25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

28 #ifndef _MLSVC_LLSR_NDL_
29 #define _MLSVC_LLSR_NDL_

31 /*
32  * LLSRPC interface.
33  *
34  *      0x50    takes the 3a handle + DWORD, returns 2 DWORDS
35  *      0x3c
36  *      0x3f    list of services?
37  *      0x3d    unknown
38  *      0x3e    unknown
39  *      0x4f
40  *      0x4d
41  *      0x4e
42  *      0x01    closes the handle obtained via 0x00
43  *      0x3b    closes the handle obtained via 0x3a
44  */

46 #include <libmlrpc/ndrtypes.ndl>
44 #include "ndrtypes.ndl"

48 #define LLSR_OPNUM_Open          0x00
49 #define LLSR_OPNUM_Close        0x01
50 #define LLSR_OPNUM_Connect      0x3a
51 #define LLSR_OPNUM_Disconnect   0x3b
52 #define LLSR_OPNUM_Unknown3c    0x3c
53 #define LLSR_OPNUM_Unknown3d    0x3d
54 #define LLSR_OPNUM_Unknown3e    0x3e
55 #define LLSR_OPNUM_Unknown3f    0x3f
56 #define LLSR_OPNUM_Unknown4d    0x4d
57 #define LLSR_OPNUM_Unknown4e    0x4e
58 #define LLSR_OPNUM_Unknown4f    0x4f
59 #define LLSR_OPNUM_Unknown50    0x50
```

new/usr/src/uts/common/smbdrv/ndl/llsrpc.ndl

2

```
62 CONTEXT_HANDLE(llsr_handle) llsr_handle_t;

65 OPERATION(LLSR_OPNUM_Open)
66 struct llsr_Open {
67     IN      LPTSTR hostname;
68     OUT     llsr_handle_t open_handle;
69     OUT     DWORD status;
70 };
    unchanged_portion_omitted
```

```

*****
30141 Sun Mar 18 01:13:22 2018
new/usr/src/uts/common/smbdrv/ndl/lsarpc.ndl
1575 untangle libmlrpc ... (smbdrv)
*****
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21 /*
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23 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
24 */

26 #ifndef _MLSVC_LSA_NDL_
27 #define _MLSVC_LSA_NDL_

29 /*
30  * Local Security Authority RPC (LSARPC) interface definition.
31  *
32  * Names containing a backslash ('\') are known as qualified or composite
33  * names. The string preceding the backslash is assumed to be the domain
34  * name and the string following the slash is assumed to be name to be
35  * resolved within that domain.
36  *
37  * Names that do not contain a backslash are known as isolated names.
38  * An isolated name may be a single label, such as john, or may be in
39  * user principal name (UPN) form, such as john@example.com.
40  */

42 #include <libmlrpc/ndrtypes.ndl>
41 #include "ndrtypes.ndl"

45 #define LSARPC_OPNUM_CloseHandle 0x00
46 #define LSARPC_OPNUM_Delete 0x01
47 #define LSARPC_OPNUM_EnumPrivileges 0x02
48 #define LSARPC_OPNUM_QuerySecurityObject 0x03
49 #define LSARPC_OPNUM_SetSecurityObject 0x04
50 #define LSARPC_OPNUM_ChangePassword 0x05
51 #define LSARPC_OPNUM_OpenPolicy 0x06
52 #define LSARPC_OPNUM_QueryInfoPolicy 0x07
53 #define LSARPC_OPNUM_SetInfoPolicy 0x08
54 #define LSARPC_OPNUM_ClearAuditLog 0x09
55 #define LSARPC_OPNUM_CreateAccount 0x0a
56 #define LSARPC_OPNUM_EnumerateAccounts 0x0b
57 #define LSARPC_OPNUM_CreateTrustedDomain 0x0c
58 #define LSARPC_OPNUM_EnumTrustedDomain 0x0d
59 #define LSARPC_OPNUM_LookupNames 0x0e
60 #define LSARPC_OPNUM_LookupSids 0x0f

```

```

61 #define LSARPC_OPNUM_CreateSecret 0x10
62 #define LSARPC_OPNUM_OpenAccount 0x11
63 #define LSARPC_OPNUM_EnumPrivsAccount 0x12
64 #define LSARPC_OPNUM_AddAccountPrivs 0x13
65 #define LSARPC_OPNUM_RemoveAccountPrivs 0x14
66 #define LSARPC_OPNUM_GetAccountQuota 0x15
67 #define LSARPC_OPNUM_SetAccountQuota 0x16
68 #define LSARPC_OPNUM_GetSystemAccessAccount 0x17
69 #define LSARPC_OPNUM_SetSystemAccessAccount 0x18
70 #define LSARPC_OPNUM_OpenTrustedDomain 0x19
71 #define LSARPC_OPNUM_QueryInfoTrustedDomain 0x1a
72 #define LSARPC_OPNUM_SetInfoTrustedDomain 0x1b
73 #define LSARPC_OPNUM_OpenSecret 0x1c
74 #define LSARPC_OPNUM_SetSecret 0x1d
75 #define LSARPC_OPNUM_QuerySecret 0x1e
76 #define LSARPC_OPNUM_LookupPrivValue 0x1f
77 #define LSARPC_OPNUM_LookupPrivName 0x20
78 #define LSARPC_OPNUM_LookupPrivDisplayName 0x21
79 #define LSARPC_OPNUM_DeleteObject 0x22
80 #define LSARPC_OPNUM_EnumAccountsWithUserRight 0x23
81 #define LSARPC_OPNUM_EnumAccountRights 0x24
82 #define LSARPC_OPNUM_AddAccountRights 0x25
83 #define LSARPC_OPNUM_RemoveAccountRights 0x26
84 #define LSARPC_OPNUM_QueryTrustedDomainInfo 0x27
85 #define LSARPC_OPNUM_SetTrustedDomainInfo 0x28

87 /* Windows 2000 */
88 #define LSARPC_OPNUM_DeleteTrustedDomain 0x29
89 #define LSARPC_OPNUM_StorePrivateData 0x2a
90 #define LSARPC_OPNUM_RetrievePrivateData 0x2b
91 #define LSARPC_OPNUM_OpenPolicy2 0x2c
92 #define LSARPC_OPNUM_GetConnectedUser 0x2d
93 #define LSARPC_OPNUM_QueryInfoPolicy2 0x2e
94 #define LSARPC_OPNUM_SetInfoPolicy2 0x2f
95 #define LSARPC_OPNUM_QueryTrustedDomainInfoByName 0x30
96 #define LSARPC_OPNUM_SetTrustedDomainInfoByName 0x31
97 #define LSARPC_OPNUM_EnumTrustedDomainsEx 0x32
98 #define LSARPC_OPNUM_CreateTrustedDomainEx 0x33
99 #define LSARPC_OPNUM_CloseTrustedDomainEx 0x34
100 #define LSARPC_OPNUM_QueryDomainInfoPolicy 0x35
101 #define LSARPC_OPNUM_SetDomainInfoPolicy 0x36
102 #define LSARPC_OPNUM_OpenTrustedDomainByName 0x37
103 #define LSARPC_OPNUM_TestCall 0x38
104 #define LSARPC_OPNUM_LookupSids2 0x39
105 #define LSARPC_OPNUM_LookupNames2 0x3a
106 #define LSARPC_OPNUM_CreateTrustedDomainEx2 0x3b

108 /* Windows 2000 SP3 */
109 #define LSARPC_OPNUM_CredWrite 0x3c
110 #define LSARPC_OPNUM_CredRead 0x3d
111 #define LSARPC_OPNUM_CredEnumerate 0x3e
112 #define LSARPC_OPNUM_CredWriteDomainCreds 0x3f
113 #define LSARPC_OPNUM_CredReadDomainCreds 0x40
114 #define LSARPC_OPNUM_CredDelete 0x41
115 #define LSARPC_OPNUM_CredGetTargetInfo 0x42
116 #define LSARPC_OPNUM_CredProfileLoaded 0x43
117 #define LSARPC_OPNUM_LookupNames3 0x44
118 #define LSARPC_OPNUM_CredGetSessionTypes 0x45
119 #define LSARPC_OPNUM_RegisterAuditEvent 0x46
120 #define LSARPC_OPNUM_GenAuditEvent 0x47
121 #define LSARPC_OPNUM_UnregisterAuditEvent 0x48
122 #define LSARPC_OPNUM_QueryForestTrustInfo 0x49
123 #define LSARPC_OPNUM_SetForestTrustInfo 0x4a
124 #define LSARPC_OPNUM_CredRename 0x4b
125 #define LSARPC_OPNUM_LookupSids3 0x4c
126 #define LSARPC_OPNUM_LookupNames4 0x4d

```

```

127 #define LSARPC_OPNUM_OpenPolicySce          0x4e

129 /* Windows Server 2003 */
130 #define LSARPC_OPNUM_AdtRegisterSecurityEventSource 0x4f
131 #define LSARPC_OPNUM_AdtUnregisterSecurityEventSource 0x50
132 #define LSARPC_OPNUM_AdtReportSecurityEvent 0x51

134 /* Windows Vista */
135 #define LSARPC_OPNUM_CredFindBestCredential 0x52
136 #define LSARPC_OPNUM_SetAuditPolicy 0x53
137 #define LSARPC_OPNUM_QueryAuditPolicy 0x54
138 #define LSARPC_OPNUM_EnumerateAuditPolicy 0x55
139 #define LSARPC_OPNUM_EnumerateAuditCategories 0x56
140 #define LSARPC_OPNUM_EnumerateAuditSubCategories 0x57
141 #define LSARPC_OPNUM_LookupAuditCategoryName 0x58
142 #define LSARPC_OPNUM_LookupAuditSubCategoryName 0x59
143 #define LSARPC_OPNUM_SetAuditSecurity 0x5a
144 #define LSARPC_OPNUM_QueryAuditSecurity 0x5b
145 #define LSARPC_OPNUM_CredReadByTokenHandle 0x5c
146 #define LSARPC_OPNUM_CredRestoreCredentials 0x5d
147 #define LSARPC_OPNUM_CredBackupCredentials 0x5e

149 /*
150 * Lookup levels. Level 1 appears to mean only look on the local host and
151 * level 2 means forward the request to the PDC. On the PDC it probably
152 * doesn't matter which level you use but on a BDC a level 1 lookup will
153 * fail if the BDC doesn't have the info whereas a level 2 lookup will also
154 * check with the PDC.
155 */
156 #define LSA_LOOKUP_WKSTA 1 /* Windows NT 3.1 */
157 #define LSA_LOOKUP_PDC 2
158 #define LSA_LOOKUP_TDL 3
159 #define LSA_LOOKUP_GC 4 /* Windows 2000 */
160 #define LSA_LOOKUP_XFORESTREFERRAL 5 /* Windows XP */
161 #define LSA_LOOKUP_XFORESTRESOLVE 6
162 #define LSA_LOOKUP_RODCREFERRALTOFULLDC 7 /* Windows Vista */

164 /*
165 * Name/SID lookup flags
166 */
167 #define LSA_LOOKUP_NAME_NOT_SPN 0x00000001
168 #define LSA_LOOKUP_NAME_MAYBE_XFOREST 0x00000002
169 #define LSA_LOOKUP_NAME_IN_DBVIEW 0x00000004

171 /*
172 * Name/SID lookup options
173 *
174 * 0x00000000 Lookup isolated names both locally and in domains/forests.
175 * 0x80000000 Lookup isolated names (except for UPNs) only in the local
176 * account database. Do not lookup UPNs.
177 */
178 #define LSA_LOOKUP_OPT_ALL 0x00000000
179 #define LSA_LOOKUP_OPT_LOCAL 0x80000000

181 /*
182 * Client revision
183 *
184 * 0x00000001 Client does not understand DNS names or forests.
185 * 0x00000002 Client understands DNS names and forests.
186 *
187 * Notes:
188 * 0 means the same as 1
189 * Anything greater than 2 means the same as 2
190 */
191 #define LSA_CLIENT_REVISION_NT 0x00000001
192 #define LSA_CLIENT_REVISION_AD 0x00000002

```

```

194 /*
195 * Definition for a SID. The ndl compiler won't allow a typedef of
196 * a structure containing variable size members.
197 */
198 struct mlsa_sid {
199     BYTE Revision;
200     BYTE SubAuthCount;
201     BYTE Authority[6];
202     SIZE_IS(SubAuthCount)
203     DWORD SubAuthority[ANY_SIZE_ARRAY];
204 };

```

unchanged_portion_omitted

new/usr/src/uts/common/smbdrv/ndl/msgsvc.ndl

1

1962 Sun Mar 18 01:13:22 2018

new/usr/src/uts/common/smbdrv/ndl/msgsvc.ndl

1575 untangle libmlrpc .. (smbdrv)

```
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2  * CDDL HEADER START
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14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
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16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright 2008 Sun Microsystems, Inc. All rights reserved.
23 * Use is subject to license terms.
24 *
25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

28 #ifndef _MSGVC_NDL_
29 #define _MSGVC_NDL_

31 /*
32  * Message Service
33 */

35 #include <libmlrpc/ndrtypes.ndl>
33 #include "ndrtypes.ndl"

37 #define MSGVCSEND_OPNUM_NetrSendMessage      0x00

39 struct msgsvc_uid {
40     DWORD    data1;
41     WORD     data2;
42     WORD     data3;
43     BYTE     data4[8];
44 };
_____unchanged_portion_omitted_
```

new/usr/src/uts/common/smbdrv/ndl/netdfs.ndl

1

12452 Sun Mar 18 01:13:22 2018

new/usr/src/uts/common/smbdrv/ndl/netdfs.ndl

1575 untangle libmlrpc .. (smbdrv)

```
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17 * information: Portions Copyright [yyyy] [name of copyright owner]
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19 * CDDL HEADER END
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21 /*
22 * Copyright 2010 Sun Microsystems, Inc. All rights reserved.
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24 *
25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

28 #ifndef _NETDFS_NDL_
29 #define _NETDFS_NDL_

31 /*
32 * NT Distributed File Service (NETDFS) RPC interface definition.
33 */

35 #include <libmlrpc/ndrtypes.ndl>
33 #include "ndrtypes.ndl"

38 #define NETDFS_ABSTRACT_UUID          "4fc742e0-4a10-11cf-8273-00aa004ae673"
39 #define NETDFS_ABSTRACT_VERS          3

41 #define NETDFS_TRANSFER_UUID          "8a885d04-1ceb-11c9-9fe8-08002b104860"
42 #define NETDFS_TRANSFER_VERS          2

44 #define NETDFS_OPNUM_GETVER            0x00
45 #define NETDFS_OPNUM_ADD                0x01
46 #define NETDFS_OPNUM_REMOVE            0x02
47 #define NETDFS_OPNUM_SETINFO           0x03
48 #define NETDFS_OPNUM_GETINFO           0x04
49 #define NETDFS_OPNUM_ENUM              0x05
50 #define NETDFS_OPNUM_MOVE              0x06
51 #define NETDFS_OPNUM_RENAME            0x07
52 #define NETDFS_OPNUM_ADDSTDROOT        0x0c
53 #define NETDFS_OPNUM_REMSTDROOT        0x0d
54 #define NETDFS_OPNUM_ENUMEX            0x15

56 #define DFS_MANAGER_VERSION_NT4        0x01
57 #define DFS_MANAGER_VERSION_W2K        0x02
58 #define DFS_MANAGER_VERSION_W2K3      0x04

60 struct netdfs_uid {
```

new/usr/src/uts/common/smbdrv/ndl/netdfs.ndl

2

```
61     DWORD data1;
62     WORD data2;
63     WORD data3;
64     BYTE data4[8];
65 };
```

unchanged portion omitted


```

*****
11376 Sun Mar 18 01:13:23 2018
new/usr/src/uts/common/smbdrv/ndl/netlogon.ndl
1575 untangle libmlrpc ... (smbdrv)
*****
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17 * information: Portions Copyright [yyyy] [name of copyright owner]
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20 */
21 /*
22 * Copyright 2008 Sun Microsystems, Inc. All rights reserved.
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24 *
25 * Copyright 2014 Nexenta Systems, Inc. All rights reserved.
26 */

28 #ifndef _MLSVC_NETR_NDL_
29 #define _MLSVC_NETR_NDL_

31 /*
32 *****
33 *
34 * NetLogon RPC (NETR) interface definition.
35 *
36 *****
37 */

39 #include <libmlrpc/ndrtypes.ndl>
39 #include "ndrtypes.ndl"

42 #define NETR_OPNUM_UasLogon          0x00
43 #define NETR_OPNUM_UasLogoff        0x01
44 #define NETR_OPNUM_SamLogon        0x02
45 #define NETR_OPNUM_SamLogoff       0x03
46 #define NETR_OPNUM_ServerReqChallenge 0x04
47 #define NETR_OPNUM_ServerAuthenticate 0x05
48 #define NETR_OPNUM_ServerPasswordSet 0x06
49 #define NETR_OPNUM_DatabaseDeltas  0x07
50 #define NETR_OPNUM_DatabaseSync    0x08
51 #define NETR_OPNUM_AccountDeltas   0x09
52 #define NETR_OPNUM_AccountSync     0x0a
53 #define NETR_OPNUM_GetDCName       0x0b
54 #define NETR_OPNUM_LogonControl    0x0c
55 #define NETR_OPNUM_GetAnyDCName    0x0d
56 #define NETR_OPNUM_LogonControl2   0x0e
57 #define NETR_OPNUM_ServerAuthenticate2 0x0f
58 #define NETR_OPNUM_DatabaseSync2   0x10
59 #define NETR_OPNUM_DatabaseRedo    0x11
60 #define NETR_OPNUM_LogonControl2Ex 0x12

```

```

61 #define NETR_OPNUM_TrustDomainList  0x13
62 #define NETR_OPNUM_DsrGetDcName    0x14
63 #define NETR_OPNUM_LogonGetCapabilities 0x15
64 #define NETR_OPNUM_LogonSetServiceBits 0x16
65 #define NETR_OPNUM_LogonGetTrustRid 0x17
66 #define NETR_OPNUM_LogonComputeServerDigest 0x18
67 #define NETR_OPNUM_LogonComputeClientDigest 0x19
68 #define NETR_OPNUM_ServerAuthenticate3 0x1a
69 #define NETR_OPNUM_DsrGetDcNameEx  0x1b
70 #define NETR_OPNUM_DsrGetSiteName  0x1c
71 #define NETR_OPNUM_LogonGetDomainInfo 0x1d
72 #define NETR_OPNUM_ServerPasswordSet2 0x1e

74 /*
75 * This is not a real NETR OPNUM. It's used to unpack the
76 * struct krb5_validation_info found in the Kerberos PAC.
77 */
78 #define NETR_OPNUM_decode_krb5_pac 1000

81 struct netr_sid {
82     BYTE Revision;
83     BYTE SubAuthCount;
84     BYTE Authority[6];
85     SIZE_IS(SubAuthCount)
86     DWORD SubAuthority[ANY_SIZE_ARRAY];
87 };
_____unchanged_portion_omitted_____

```

```

*****
39157 Sun Mar 18 01:13:23 2018
new/usr/src/uts/common/smbstrv/nd1/samrpc.nd1
1575 untangle libmlrpc ... (smbstrv)
*****
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19 * CDDL HEADER END
20 */

22 /*
23 * Copyright (c) 2007, 2010, Oracle and/or its affiliates. All rights reserved.
24 * Copyright 2015 Nexenta Systems, Inc. All rights reserved.
25 */

27 #ifndef _MLSVC_SAM_NDL_
28 #define _MLSVC_SAM_NDL_

30 /*
31 * Security Accounts Manager RPC (SAMR) interface definition.
32 */

34 #include <libmlrpc/ndrtypes.nd1>
34 #include "ndrtypes.nd1"

36 /* Windows NT */
37 #define SAMR_OPNUM_Connect 0x00 /* SamrConnect */
38 #define SAMR_OPNUM_CloseHandle 0x01
39 #define SAMR_OPNUM_SetSecObject 0x02
40 #define SAMR_OPNUM_QuerySecObject 0x03
41 #define SAMR_OPNUM_ShutdownSamServer 0x04 /* NotUsedOnWire */
42 #define SAMR_OPNUM_LookupDomain 0x05
43 #define SAMR_OPNUM_EnumLocalDomains 0x06
44 #define SAMR_OPNUM_OpenDomain 0x07
45 #define SAMR_OPNUM_QueryDomainInfo 0x08
46 #define SAMR_OPNUM_SetDomainInfo 0x09
47 #define SAMR_OPNUM_CreateDomainGroup 0x0a
48 #define SAMR_OPNUM_QueryDomainGroups 0x0b
49 #define SAMR_OPNUM_CreateDomainUser 0x0c
50 #define SAMR_OPNUM_EnumDomainUsers 0x0d
51 #define SAMR_OPNUM_CreateDomainAlias 0x0e
52 #define SAMR_OPNUM_EnumDomainAliases 0x0f
53 #define SAMR_OPNUM_LookupIds 0x10 /* GetAliasMembership */
54 #define SAMR_OPNUM_LookupNames 0x11
55 #define SAMR_OPNUM_LookupDomainIds 0x12
56 #define SAMR_OPNUM_OpenGroup 0x13
57 #define SAMR_OPNUM_QueryGroupInfo 0x14
58 #define SAMR_OPNUM_StoreGroupInfo 0x15
59 #define SAMR_OPNUM_AddGroupMember 0x16
60 #define SAMR_OPNUM_DeleteDomainGroup 0x17

```

```

61 #define SAMR_OPNUM_DeleteGroupMember 0x18
62 #define SAMR_OPNUM_ListGroupMembers 0x19
63 #define SAMR_OPNUM_SetGroupMemberAttributes 0x1a
64 #define SAMR_OPNUM_OpenAlias 0x1b
65 #define SAMR_OPNUM_QueryAliasInfo 0x1c
66 #define SAMR_OPNUM_SetAliasInfo 0x1d
67 #define SAMR_OPNUM_DeleteDomainAlias 0x1e
68 #define SAMR_OPNUM_AddAliasMember 0x1f
69 #define SAMR_OPNUM_DeleteAliasMember 0x20
70 #define SAMR_OPNUM_ListAliasMembers 0x21
71 #define SAMR_OPNUM_OpenUser 0x22
72 #define SAMR_OPNUM_DeleteUser 0x23
73 #define SAMR_OPNUM_QueryUserInfo 0x24
74 #define SAMR_OPNUM_SetUserInfo 0x25 /* SetUserInfo */
75 #define SAMR_OPNUM_ChangeUserPassword0 0x26 /* ChangeUserPassword */
76 #define SAMR_OPNUM_QueryUserGroups 0x27
77 #define SAMR_OPNUM_QueryDispInfo 0x28 /* QueryDispInfo1 */
78 #define SAMR_OPNUM_GetDisplayEnumIndex 0x29
79 #define SAMR_OPNUM_TestPrivateDomainFunctions 0x2a /* NotUsedOnWire */
80 #define SAMR_OPNUM_TestPrivateUserFunctions 0x2b /* NotUsedOnWire */
81 #define SAMR_OPNUM_GetUserPwInfo 0x2c

83 /* Windows 2000 */
84 #define SAMR_OPNUM_RemoveMemberFromForeignDomain 0x2d
85 #define SAMR_OPNUM_QueryInfoDomain2 0x2e
86 #define SAMR_OPNUM_QueryInfoUser2 0x2f
87 #define SAMR_OPNUM_EnumDomainGroups 0x30 /* QueryDispInfo2 */
88 #define SAMR_OPNUM_GetDisplayEnumIndex2 0x31
89 #define SAMR_OPNUM_CreateUser 0x32
90 #define SAMR_OPNUM_QueryDispInfo4 0x33
91 #define SAMR_OPNUM_AddMultipleAliasMembers 0x34
92 #define SAMR_OPNUM_RemoveMultipleAliasMembers 0x35
93 #define SAMR_OPNUM_ChangeUserOemPassword 0x36
94 #define SAMR_OPNUM_ChangePasswordUser2 0x37 /* UnicodePasswd */
95 #define SAMR_OPNUM_GetDomainPwInfo 0x38
96 #define SAMR_OPNUM_Connect2 0x39 /* SamrConnect2 */
97 #define SAMR_OPNUM_SetUserInfo 0x3a /* SetInfoUser2 */
98 #define SAMR_OPNUM_SetBootKeyInformation 0x3b
99 #define SAMR_OPNUM_GetBootKeyInformation 0x3c
100 #define SAMR_OPNUM_Connect3 0x3d /* NotUsedOnWire */
101 #define SAMR_OPNUM_Connect4 0x3e /* SamrConnect4 */
102 #define SAMR_OPNUM_ChangeUserUnicodePassword3 0x3f

104 /* Windows XP and Windows Server 2003 */
105 #define SAMR_OPNUM_Connect5 0x40 /* SamrConnect5 */
106 #define SAMR_OPNUM_RidToSid 0x41
107 #define SAMR_OPNUM_SetDSRMPasswd 0x42
108 #define SAMR_OPNUM_ValidatePassword 0x43

110 /* Windows Vista */
111 #define SAMR_OPNUM_QueryLocalizableAccountsInDomain 0x44
112 #define SAMR_OPNUM_PerformGenericOperation 0x45

115 /*
116 * Sam account flags used when creating an account. These flags seem
117 * to be very similar to the USER_INFO_X flags (UF_XXX) in lmaccess.h
118 * but the values are different.
119 */
120 #define SAMR_AF_ACCOUNTDISABLE 0x0001
121 #define SAMR_AF_HOMEDIR_REQUIRED 0x0002
122 #define SAMR_AF_PASSWD_NOTREQD 0x0004
123 #define SAMR_AF_TEMP_DUPLICATE_ACCOUNT 0x0008
124 #define SAMR_AF_NORMAL_ACCOUNT 0x0010
125 #define SAMR_AF_MNS_LOGON_ACCOUNT 0x0020
126 #define SAMR_AF_INTERDOMAIN_TRUST_ACCOUNT 0x0040

```

```

127 #define SAMR_AF_WORKSTATION_TRUST_ACCOUNT    0x0080
128 #define SAMR_AF_SERVER_TRUST_ACCOUNT        0x0100
129 #define SAMR_AF_DONT_EXPIRE_PASSWD         0x0200
130 #define SAMR_AF_ACCOUNT_AUTOLOCK          0x0400

133 #define SAMR_AF_MACHINE_ACCOUNT_MASK      ( \
134     SAMR_AF_INTERDOMAIN_TRUST_ACCOUNT \
135     | SAMR_AF_WORKSTATION_TRUST_ACCOUNT \
136     | SAMR_AF_SERVER_TRUST_ACCOUNT)

138 #define SAMR_AF_ACCOUNT_TYPE_MASK         ( \
139     SAMR_AF_TEMP_DUPLICATE_ACCOUNT \
140     | SAMR_AF_NORMAL_ACCOUNT \
141     | SAMR_AF_INTERDOMAIN_TRUST_ACCOUNT \
142     | SAMR_AF_WORKSTATION_TRUST_ACCOUNT \
143     | SAMR_AF_SERVER_TRUST_ACCOUNT)

145 /*
146  * QueryUserInfo UserAllInformation WhichFields
147  */
148 #define SAMR_USER_ALL_USERNAME             0x00000001
149 #define SAMR_USER_ALL_FULLNAME            0x00000002
150 #define SAMR_USER_ALL_USERID              0x00000004
151 #define SAMR_USER_ALL_PRIMARYGROUPID      0x00000008
152 #define SAMR_USER_ALL_ADMINCOMMENT        0x00000010
153 #define SAMR_USER_ALL_USERCOMMENT         0x00000020
154 #define SAMR_USER_ALL_HOMEDIRECTORY       0x00000040
155 #define SAMR_USER_ALL_HOMEDIRECTORYDRIVE  0x00000080
156 #define SAMR_USER_ALL_SCRIPTPATH          0x00000100
157 #define SAMR_USER_ALL_PROFILEPATH         0x00000200
158 #define SAMR_USER_ALL_WORKSTATIONS        0x00000400
159 #define SAMR_USER_ALL_LASTLOGON           0x00000800
160 #define SAMR_USER_ALL_LASTLOGOFF          0x00001000
161 #define SAMR_USER_ALL_LOGONHOURS          0x00002000
162 #define SAMR_USER_ALL_BADPASSWORDCOUNT   0x00004000
163 #define SAMR_USER_ALL_LOGONCOUNT         0x00008000
164 #define SAMR_USER_ALL_PASSWORDCANCHANGE   0x00010000
165 #define SAMR_USER_ALL_PASSWORDMUSTCHANGE  0x00020000
166 #define SAMR_USER_ALL_PASSWORDLASTSET     0x00040000
167 #define SAMR_USER_ALL_ACCOUNTEXPIRES      0x00080000
168 #define SAMR_USER_ALL_USERACCOUNTCONTROL  0x00100000
169 #define SAMR_USER_ALL_PARAMETERS          0x00200000
170 #define SAMR_USER_ALL_COUNTRYCODE         0x00400000
171 #define SAMR_USER_ALL_CODEPAGE            0x00800000
172 #define SAMR_USER_ALL_NTPASSWORDPRESENT    0x01000000
173 #define SAMR_USER_ALL_LMPASSWORDPRESENT    0x02000000
174 #define SAMR_USER_ALL_PRIVATEDATA         0x04000000
175 #define SAMR_USER_ALL_PASSWORDEXPIRED     0x08000000
176 #define SAMR_USER_ALL_SECURITYDESCRIPTOR  0x10000000
177 #define SAMR_USER_ALL_OWF_PASSWORD        0x20000000
178 #define SAMR_USER_ALL_UNDEFINED_MASK      0xC0000000

180 /*
181  * Alias Access Mask values for SAMR
182  * Section 2.2.1.6 of MS-SAMR
183  */
184 #define SAMR_ALIAS_ACCESS_EXECUTE          0x00020008
185 #define SAMR_ALIAS_ACCESS_WRITE            0x00020013
186 #define SAMR_ALIAS_ACCESS_READ            0x00020004
187 #define SAMR_ALIAS_ACCESS_ALL_ACCESS      0x000F001F
188 #define SAMR_ALIAS_ACCESS_WRITE_ACCOUNT   0x00000010
189 #define SAMR_ALIAS_ACCESS_READ_INFO       0x00000008
190 #define SAMR_ALIAS_ACCESS_LIST_MEMBERS    0x00000004
191 #define SAMR_ALIAS_ACCESS_REMOVE_MEMBER   0x00000002
192 #define SAMR_ALIAS_ACCESS_ADD_MEMBER      0x00000001

```

```

194 #define SAMR_REVISION_1                    1    /* Pre Windows 2000 */
195 #define SAMR_REVISION_2                    2    /* Windows 2000 */
196 #define SAMR_REVISION_3                    3    /* Post Windows 2000 */

198 /*
199  * Definition for a SID. The nd1 compiler does not allow a typedef of
200  * a structure containing variable size members.
201  * Note: cast compatible with smb_sid_t, and code depends on that.
202  */
203 struct samr_sid {
204     BYTE          Revision;
205     BYTE          SubAuthCount;
206     BYTE          Authority[6];
207     SIZE_IS(SubAuthCount)
208     DWORD         SubAuthority[ANY_SIZE_ARRAY];
209 };
210 unchanged_portion_omitted

354 /*
355  * SAMPR_USER_PASSWORD (in the MS Net API) or
356  * struct samr_user_password (internal use) is
357  * the "clear" form of struct samr_encr_passwd
358  * (SAMPR_ENCRYPTED_USER_PASSWORD in MS Net).
359  * It's not used by ndrgen, but is declared here
360  * to help clarify the relationship between these,
361  * and for the benefit of our client-side code.
362  */
363 #ifndef NDRGEN
364 #define SAMR_USER_PWLEN 256
365 struct samr_user_password {
366     ndr_wchar_t    Buffer[SAMR_USER_PWLEN];
366     smb_wchar_t    Buffer[SAMR_USER_PWLEN];
367     DWORD Length;
368 };
369 unchanged_portion_omitted

```

```

*****
19981 Sun Mar 18 01:13:23 2018
new/usr/src/uts/common/smbdrv/nd1/spoolss.nd1
1575 untangle libmlrpc ... (smbdrv)
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright (c) 2007, 2010, Oracle and/or its affiliates. All rights reserved.
23 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
24 */

26 #ifndef _SPOOLSS_NDL_
27 #define _SPOOLSS_NDL_

29 #include <libmlrpc/ndrtypes.nd1>
28 #include "ndrtypes.nd1"
30 #include "security.nd1"

32 #define TABLE_STRING 1
33 #define TABLE_DWORD 2
34 #define TABLE_TIME 3
35 #define TABLE_DEVMODE 4
36 #define TABLE_SECURITY_DESCRIPTOR 5

38 #define SPOOLSS_OPNUM_EnumPrinters 0x00
39 #define SPOOLSS_OPNUM_OpenPrinter 0x01
40 #define SPOOLSS_OPNUM_GetJob 0x03
41 #define SPOOLSS_OPNUM_EnumJobs 0x04
42 #define SPOOLSS_OPNUM_DeletePrinter 0x06
43 #define SPOOLSS_OPNUM_GetPrinter 0x08
44 #define SPOOLSS_OPNUM_GetPrinterDriver 0x0b
45 #define SPOOLSS_OPNUM_DeletePrinterDriver 0x0d
46 #define SPOOLSS_OPNUM_StartDocPrinter 0x11
47 #define SPOOLSS_OPNUM_StartPagePrinter 0x12
48 #define SPOOLSS_OPNUM_WritePrinter 0x13
49 #define SPOOLSS_OPNUM_EndPagePrinter 0x14
50 #define SPOOLSS_OPNUM_AbortPrinter 0x15
51 #define SPOOLSS_OPNUM_AddJob 0x18
52 #define SPOOLSS_OPNUM_ScheduleJob 0x19
53 #define SPOOLSS_OPNUM_GetPrinterData 0x1a
54 #define SPOOLSS_OPNUM_ClosePrinter 0x1d
55 #define SPOOLSS_OPNUM_AddForm 0x1e
56 #define SPOOLSS_OPNUM_DeleteForm 0x1f
57 #define SPOOLSS_OPNUM_EndDocPrinter 0x17
58 #define SPOOLSS_OPNUM_EnumForms 0x22
59 #define SPOOLSS_OPNUM_EnumPorts 0x23
60 #define SPOOLSS_OPNUM_EnumMonitor 0x24

```

```

61 #define SPOOLSS_OPNUM_DeletePort 0x27
62 #define SPOOLSS_OPNUM_CreatePrinterIC 0x28
63 #define SPOOLSS_OPNUM_AddMonitor 0x2e
64 #define SPOOLSS_OPNUM_DeleteMonitor 0x2f
65 #define SPOOLSS_OPNUM_ResetPrinter 0x34
66 #define SPOOLSS_OPNUM_GetPrinterDriver2 0x35
67 #define SPOOLSS_OPNUM_FCPN 0x38
68 #define SPOOLSS_OPNUM_ReplyOpenPrinter 0x3a
69 #define SPOOLSS_OPNUM_ReplyClosePrinter 0x3c
70 #define SPOOLSS_OPNUM_AddPortEx 0x3d
71 #define SPOOLSS_OPNUM_RFFPCNEX 0x41
72 #define SPOOLSS_OPNUM_RRPCN 0x42
73 #define SPOOLSS_OPNUM_RFNPCNEX 0x43
74 #define SPOOLSS_OPNUM_OpenPrinterEx 0x45
75 #define SPOOLSS_OPNUM_SetPort 0x47
76 #define SPOOLSS_OPNUM_EnumPrinterData 0x48
77 #define SPOOLSS_OPNUM_EnumPrinterDataEx 0x4f
78 #define SPOOLSS_OPNUM_EnumPrinterKey 0x50

80 CONTEXT_HANDLE(spoolss_handle) spoolss_handle_t;

82 struct spoolssDevmodeContainer {
83     BYTE DevContCount;
84     SIZE_IS(DevContCount)
85     BYTE *DevMode;
86 };
_____unchanged_portion_omitted_

```

```

*****
51723 Sun Mar 18 01:13:23 2018
new/usr/src/uts/common/smbdrv/nd1/srvsvc.nd1
1575 untangle libmlrpc ... (smbdrv)
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright 2010 Sun Microsystems, Inc. All rights reserved.
23 * Use is subject to license terms.
24 *
25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

28 #ifndef _MLSVC_LANMAN_NDL_
29 #define _MLSVC_LANMAN_NDL_

31 /*
32 * LanMan RPC (WKSSVC and SRVSVC) interface definitions.
33 */

35 #include <libmlrpc/ndrtypes.nd1>
33 #include "ndrtypes.nd1"

37 /*
38 * WARNING: The cpp(1) macros in this file are not understood by
39 * /usr/bin/cpp. Use /usr/libexec/cpp instead.
40 */

42 /*
43 * TYPE CONSTRUCTOR MACROS FOR INFORMATION RESULTS
44 *****
45 *
46 * This is an explanation of the macros that follow this comment.
47 *
48 * The LANMAN API's look something like this:
49 *
50 * NetXXXGetInfo (
51 *     IN char * servername,
52 *     IN char * XXX_name,
53 *     IN int level,
54 *     OUT char ** bufptr);
55 *
56 * The bufptr is a pointer-to-pointer (**). The NetXXXGetInfo() function
57 * malloc()'s memory, and sets *bufptr to the memory. The API's
58 * are indiscriminated about what bufptr really points to.
59 *
60 * However, for RPI (Remote Procedure Interface), this just won't fly.

```

```

61 * We have to know what the result data looks like in order to
62 * properly (un)marshall it.
63 *
64 * As best we can determine, the MSC developers use an RPI that looks
65 * like this (approximately in IDL):
66 *
67 * RemoteNetXXXGetInfo (
68 *     IN char * servername,
69 *     IN char * XXX_name,
70 *     IN int level,
71 *     OUT union switch(level) {
72 *         case(1): XXX_INFO_1 * info1;
73 *         case(2): XXX_INFO_2 * info2;
74 *     } bufptr);
75 *
76 * The level guides the (un)marshalling as it follows the pointer.
77 * DCE(MS) IDL will automatically form a structure for the union
78 * which looks about like this (much as Sun/RPC does):
79 *
80 * struct {
81 *     int _keyvalue_;
82 *     union {
83 *         XXX_INFO_1 *info1;
84 *         XXX_INFO_2 *info2;
85 *     } _u;
86 * } bufptr;
87 *
88 * This struct is not made visible to the application. It is purely
89 * an internal (automagic) thing. However, ndrngen does not do this.
90 * The ndrngen input MUST remain a valid C header file, and all
91 * struct and union declarations must be exact, and we (would) have
92 * to tediously code sequences like this (approximately NDL):
93 *
94 * union XXXGetInfo_result_u {
95 *     [case(1)]
96 *         XXX_INFO_1 * info1;
97 *     [case(2)]
98 *         XXX_INFO_2 * info2;
99 * };
100 *
101 * struct XXXGetInfo_result {
102 *     int level;
103 *
104 *     union XXXGetInfo_result_u bufptr;
105 * };
106 *
107 * struct XXXGetInfo_param { // still have to code this one
108 *     [in] char * servername;
109 *     [in] ushort level;
110 *     [out] struct XXXGetInfo_result result;
111 * };
112 *
113 * This is error prone and difficult to write, and more difficult
114 * and distracting to read. It is hard to pick through the
115 * necessary evils and see what's really going on. To mitigate
116 * the situation, we have a series of macros which generate
117 * the tedious code, and are easily recognized as supporting
118 * fluff rather than important structures:
119 *
120 * INFO1RES_DEFINITION(XXXGetInfo,
121 *     INFO1RES_UNION_ENTRY(XXXGetInfo, 1)
122 *     INFO1RES_UNION_ENTRY(XXXGetInfo, 2))
123 *
124 * structt XXXGetInfo_param { // still have to code this one
125 *     [in] char * servername;
126 *     [in] ushort level;

```

```

127 *      [out] struct XXXGetInfo_result result;
128 *      };
129 *
130 * The INFO1RES_DEFINITION macro defines two types:
131 *
132 *      union ..._ru {...}
133 *      struct ..._result { DWORD level; union ..._ru bufptr; }
134 *
135 * There is a similar macro, INFO1RESBUF_DEFINITION, which defines
136 * actual space rather than just pointers. It defines:
137 *
138 *      union ..._rb {...}
139 *      typedef union ..._rb ..._rb;
140 *
141 * Which is handy in functions because the initial coding sequence
142 * looks something like:
143 *
144 *      XXXGetInfoParam (struct XXXGetInfo_param *param) {
145 *          XXXGetInfo_rb  rb;
146 *
147 *          param->result.level = param->level;    // for marshalling
148 *          param->result.bufptr.nullptr = &rb;    // anything fits
149 *
150 * There are two flavors of Info results. The first is the
151 * single XXX_INFO_x result, which the foregoing example
152 * uses. The second flavor is when there are multiple entries
153 * possible. Again, for the sake of guiding the marshalling,
154 * the RPIs use something accommodating:
155 *
156 *      struct XXX_INFO_1_result {
157 *          unsigned  entriesread;
158 *          [size_is(entriesread)]
159 *          XXX_INFO_1 *  table;
160 *      };
161 *
162 *      union { XXX_INFO_1_result *info1; ...}
163 *
164 * Notice this is using XXX_INFO_1_result rather than just XXX_INFO_1.
165 * The requirements from this point are much like before. Because of
166 * the variable-length value, there is no realistic way to do something
167 * like INFO1RESBUF_DEFINITION.
168 *
169 * There are two sets of macros here. INFO1RES_xxx are for the
170 * single result case, and INFONRES_xxx for the multiple entry case.
171 */
172
173 /*
174 * INFO1RES...
175 * Type constructors for single-result case
176 */
177
178 #define INFO1RES_DEFINITION(INFOPREF, ENTRIES) \
179     INFO1RES_UNION(INFOPREF, ENTRIES) \
180     INFO1RES_STRUCT(INFOPREF)
181
182 #define INFO1RES_UNION(INFOPREF, ENTRIES) \
183     union INFOPREF##_ru { \
184         INFO1RES_UNION_NULLPTR \
185         ENTRIES \
186     };
187
188 #define INFO1RES_UNION_NULLPTR \
189     DEFAULT char *          nullptr;
190
191 #define INFO1RES_UNION_ENTRY(INFOPREF, NUM) \
192     CASE(NUM) struct INFOPREF##_##NUM * bufptr##NUM;

```

```

194 #define INFO1RES_STRUCT(INFOPREF) \
195     struct INFOPREF##_result { \
196         DWORD  level; \
197         SWITCH(level) \
198             union INFOPREF##_ru bufptr; \
199     };
200
201 /*
202 * INFO1RESBUF...
203 * Type constructors for single-result buffering.
204 */
205
206 #ifndef NDRGEN
207 #define INFO1RESBUF_DEFINITION(INFOPREF, ENTRIES) \
208     typedef union INFOPREF##_rb { \
209         ENTRIES \
210     } INFOPREF##_rb;
211 #define INFO1RESBUF_UNION_ENTRY(INFOPREF, NUM) \
212     CASE(NUM) struct INFOPREF##_##NUM  buf##NUM;
213 #else
214 #define INFO1RESBUF_DEFINITION(INFOPREF, ENTRIES)
215 #define INFO1RESBUF_UNION_ENTRY(INFOPREF, NUM)
216 #endif
217
218 /*
219 * INFONRES...
220 * Type constructors for multiple-result case
221 */
222
223 #define INFONRES_RESULT(INFOPREF, NUM) \
224     struct INFOPREF##_##NUM##_result { \
225         DWORD  entriesread; \
226         SIZE_IS(entriesread) \
227         struct INFOPREF##_##NUM *entries; \
228     };
229
230 #define INFONRES_DEFINITION(INFOPREF, ENTRIES) \
231     INFONRES_UNION(INFOPREF, ENTRIES) \
232     INFONRES_STRUCT(INFOPREF)
233
234 #define INFONRES_UNION(INFOPREF, ENTRIES) \
235     union INFOPREF##_ru { \
236         INFONRES_UNION_NULLPTR \
237         INFONRES_UNION_INFONRES \
238         ENTRIES \
239     };
240
241 #define INFONRES_UNION_NULLPTR \
242     DEFAULT char *          nullptr;
243
244 #ifndef NDRGEN
245 #define INFONRES_UNION_INFONRES \
246     struct mslm_infonres *          p;
247 #else
248 #define INFONRES_UNION_INFONRES
249 #endif
250
251 #define INFONRES_UNION_ENTRY(INFOPREF, NUM) \
252     CASE(NUM) struct INFOPREF##_##NUM##_result * bufptr##NUM;
253
254 #define INFONRES_STRUCT(INFOPREF) \

```

```
259     struct INFOPREF##_result { \
260         DWORD   level; \
261         SWITCH(level) \
262         union INFOPREF##_ru bufptr; \
263     };

265 #ifndef NDRGEN
266 /*
267  * This just makes things a little easier on the stub modules:
268  *
269  * XXXGetInfoParam (struct XXXGetInfo_param *param) {
270  *     struct mslm_infonres   infonres;
271  *
272  *     infonres.entriesread = 0;
273  *     infonres.entries = 0;
274  *     param->result.level = param->level;    // for marshalling
275  *     param->result.bufptr.p = &infonres;
276  */
277 struct mslm_infonres {
278     DWORD   entriesread;
279     void *   entries;
280 };
unchanged_portion_omitted
```

```

*****
19461 Sun Mar 18 01:13:23 2018
new/usr/src/uts/common/smbdrv/nd1/svcctl.nd1
1575 untangle libmlrpc ... (smbdrv)
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
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8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright 2009 Sun Microsystems, Inc. All rights reserved.
23 * Use is subject to license terms.
24 *
25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

28 #ifndef _MLSVC_SVCCTL_NDL_
29 #define _MLSVC_SVCCTL_NDL_

31 /*
32  * NT Service Control Services (SVCCTL) RPC interface definition.
33  * This interface provides remote access to add, remove, start and
34  * stop services.
35  */

37 #include <libmlrpc/ndrtypes.nd1>
35 #include "ndrtypes.nd1"

39 /* Windows NT */
40 #define SVCCTL_OPNUM_Close 0x00
41 #define SVCCTL_OPNUM_ControlService 0x01
42 #define SVCCTL_OPNUM_DeleteService 0x02
43 #define SVCCTL_OPNUM_LockServiceDatabase 0x03
44 #define SVCCTL_OPNUM_QueryServiceSecurity 0x04
45 #define SVCCTL_OPNUM_SetServiceSecurity 0x05
46 #define SVCCTL_OPNUM_QueryServiceStatus 0x06
47 #define SVCCTL_OPNUM_SetServiceStatus 0x07
48 #define SVCCTL_OPNUM_UnlockServiceDatabase 0x08
49 #define SVCCTL_OPNUM_NotifyBootConfigStatus 0x09
50 #define SVCCTL_OPNUM_SetServiceBits 0x0a
51 #define SVCCTL_OPNUM_ChangeServiceConfig 0x0b
52 #define SVCCTL_OPNUM_CreateService 0x0c
53 #define SVCCTL_OPNUM_EnumDependentServices 0x0d
54 #define SVCCTL_OPNUM_EnumServicesStatus 0x0e
55 #define SVCCTL_OPNUM_OpenManager 0x0f
56 #define SVCCTL_OPNUM_OpenService 0x10
57 #define SVCCTL_OPNUM_QueryServiceConfig 0x11
58 #define SVCCTL_OPNUM_QueryServiceLockStatus 0x12
59 #define SVCCTL_OPNUM_StartService 0x13
60 #define SVCCTL_OPNUM_GetServiceDisplayNameW 0x14

```

```

61 #define SVCCTL_OPNUM_GetServiceKeyNameW 0x15
62 #define SVCCTL_OPNUM_SetServiceBitsA 0x16
63 #define SVCCTL_OPNUM_ChangeServiceConfigA 0x17
64 #define SVCCTL_OPNUM_CreateServiceA 0x18
65 #define SVCCTL_OPNUM_EnumDependentServicesA 0x19
66 #define SVCCTL_OPNUM_EnumServicesStatusA 0x1a
67 #define SVCCTL_OPNUM_OpenSCManagerA 0x1b
68 #define SVCCTL_OPNUM_OpenServiceA 0x1c
69 #define SVCCTL_OPNUM_QueryServiceConfigA 0x1d
70 #define SVCCTL_OPNUM_QueryServiceLockStatusA 0x1e
71 #define SVCCTL_OPNUM_StartServiceA 0x1f
72 #define SVCCTL_OPNUM_GetServiceDisplayNameA 0x20
73 #define SVCCTL_OPNUM_GetServiceKeyNameA 0x21
74 #define SVCCTL_OPNUM_GetCurrentGroupStateW 0x22
75 #define SVCCTL_OPNUM_EnumServiceGroupW 0x23
76 #define SVCCTL_OPNUM_ChangeServiceConfig2A 0x24
77 #define SVCCTL_OPNUM_ChangeServiceConfig2W 0x25
78 #define SVCCTL_OPNUM_QueryServiceConfig2A 0x26

80 /* Windows 2000 */
81 #define SVCCTL_OPNUM_QueryServiceConfig2W 0x27
82 #define SVCCTL_OPNUM_QueryServiceStatusEx 0x28
83 #define SVCCTL_OPNUM_EnumServicesStatusExA 0x29
84 #define SVCCTL_OPNUM_EnumServicesStatusExW 0x2a

86 /* Windows XP and Windows Server 2003 */
87 #define SVCCTL_OPNUM_SendTSMMessage 0x2b

89 /* Windows Vista */
90 #define SVCCTL_OPNUM_CreateServiceWOW64A 0x2c
91 #define SVCCTL_OPNUM_CreateServiceWOW64W 0x2d
92 #define SVCCTL_OPNUM_QueryServiceTagInfo 0x2e
93 #define SVCCTL_OPNUM_NotifyServiceStatusChange 0x2f
94 #define SVCCTL_OPNUM_GetNotifyResult 0x30
95 #define SVCCTL_OPNUM_CloseNotifyHandle 0x31
96 #define SVCCTL_OPNUM_ControlServiceExA 0x32
97 #define SVCCTL_OPNUM_ControlServiceExW 0x33
98 #define SVCCTL_OPNUM_SendPnPMessage 0x34
99 #define SVCCTL_OPNUM_ValidatePnPService 0x35
100 #define SVCCTL_OPNUM_OpenServiceStatusHandle 0x36

102 CONTEXT_HANDLE(svcctl_handle) svcctl_handle_t;

104 /*
105  * String definition for the ASCII interface.
106  */
107 struct svcctl_value {
108     DWORD    vc_first_is; /* 0 */
109     DWORD    vc_length_is;
110     SIZE_IS(vc_length_is)
111     BYTE    value[ANY_SIZE_ARRAY];
112 };
    unchanged_portion_omitted

```



```

*****
12197 Sun Mar 18 01:13:23 2018
new/usr/src/uts/common/smbdrv/nd1/winreg.nd1
1575 untangle libmlrpc ... (smbdrv)
*****
1 /*
2 * CDDL HEADER START
3 *
4 * The contents of this file are subject to the terms of the
5 * Common Development and Distribution License (the "License").
6 * You may not use this file except in compliance with the License.
7 *
8 * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9 * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright 2010 Sun Microsystems, Inc. All rights reserved.
23 * Use is subject to license terms.
24 *
25 * Copyright 2013 Nexenta Systems, Inc. All rights reserved.
26 */

28 #ifndef _MLSVC_WINREG_NDL_
29 #define _MLSVC_WINREG_NDL_

31 /*
32 * Windows Registry (WINREG) RPC interface definition.
33 *
34 * The Windows registry is split into a number of hives, which are divided
35 * by function. The hive names are abbreviated and prefixed by HKEY or HK.
36 *
37 * HKEY_CLASSES_ROOT (HKCR) Information about registered applications
38 * HKEY_CURRENT_USER (HKCU) Settings for the current logged in user.
39 * HKEY_LOCAL_MACHINE (HKLM) Settings for all users on the computer.
40 * HKEY_USERS (HKU) HKEY_CURRENT_USER subkeys for user accounts.
41 * HKEY_CURRENT_CONFIG (HKCC) Runtime configuration information.
42 * HKEY_PERFORMANCE_DATA (HKPD) Runtime performance data.
43 * HKEY_DYN_DATA (HKDD) Runtime data for Windows 9x applications.
44 * HKEY_PERFORMANCE_TEXT (HKPT) Runtime performance information.
45 * HKEY_PERFORMANCE_NLS (HKPN) Runtime performance information.
46 */

48 #include <libmlrpc/ndrtypes.nd1>
46 #include "ndrtypes.nd1"

50 /* Windows NT */
51 #define WINREG_OPNUM_OpenHKCR 0x00
52 #define WINREG_OPNUM_OpenHKCU 0x01
53 #define WINREG_OPNUM_OpenHKLM 0x02
54 #define WINREG_OPNUM_OpenHKPD 0x03
55 #define WINREG_OPNUM_OpenHKUsers 0x04
56 #define WINREG_OPNUM_Close 0x05
57 #define WINREG_OPNUM_CreateKey 0x06
58 #define WINREG_OPNUM_DeleteKey 0x07
59 #define WINREG_OPNUM_DeleteValue 0x08
60 #define WINREG_OPNUM_EnumKey 0x09

```

```

61 #define WINREG_OPNUM_EnumValue 0x0a
62 #define WINREG_OPNUM_FlushKey 0x0b
63 #define WINREG_OPNUM_GetKeySec 0x0c
64 #define WINREG_OPNUM_LoadKey 0x0d
65 #define WINREG_OPNUM_NotifyChange 0x0e
66 #define WINREG_OPNUM_OpenKey 0x0f
67 #define WINREG_OPNUM_QueryKey 0x10
68 #define WINREG_OPNUM_QueryValue 0x11
69 #define WINREG_OPNUM_ReplaceKey 0x12
70 #define WINREG_OPNUM_RestoreKey 0x13
71 #define WINREG_OPNUM_SaveKey 0x14
72 #define WINREG_OPNUM_SetKeySec 0x15

74 /* Windows 2000 */
75 #define WINREG_OPNUM_CreateValue 0x16
76 #define WINREG_OPNUM_UnloadKey 0x17
77 #define WINREG_OPNUM_Shutdown 0x18
78 #define WINREG_OPNUM_AbortShutdown 0x19
79 #define WINREG_OPNUM_GetVersion 0x1a
80 #define WINREG_OPNUM_OpenHKCC 0x1b
81 #define WINREG_OPNUM_OpenHKDD 0x1c
82 #define WINREG_OPNUM_QueryMultiValues 0x1d
83 #define WINREG_OPNUM_ShutdownEx 0x1e

85 /* Windows XP and Windows Server 2003 */
86 #define WINREG_OPNUM_SavekeyEx 0x1f
87 #define WINREG_OPNUM_OpenHKPT 0x20
88 #define WINREG_OPNUM_OpenHKPN 0x21

90 /* Windows 2003 SP1 */
91 #define WINREG_OPNUM_QueryMultiValues2 0x22
92 #define WINREG_OPNUM_DeleteKeyEx 0x23

94 #define WINREG_TYPE_NONE 0
95 #define WINREG_SZ 1
96 #define WINREG_EXPAND_SZ 2
97 #define WINREG_BINARY 3
98 #define WINREG_DWORD 4
99 #define WINREG_DWORD_BIG_ENDIAN 5
100 #define WINREG_LINK 6
101 #define WINREG_MULTI_SZ 7
102 #define WINREG_RESOURCE_LIST 8
103 #define WINREG_RESOURCE_DESC 9
104 #define WINREG_RESOURCE_REQ_LIST 10
105 #define WINREG_QWORD 11

107 #define WINREG_ACCESS_QUERY_VALUE 0x00000001
108 #define WINREG_ACCESS_SET_VALUE 0x00000002
109 #define WINREG_ACCESS_CREATE_KEY 0x00000004
110 #define WINREG_ACCESS_ENUMERATE 0x00000008
111 #define WINREG_ACCESS_NOTIFY 0x00000010
112 #define WINREG_ACCESS_CREATE_LINK 0x00000020
113 #define WINREG_ACCESS_KEY64 0x00000100
114 #define WINREG_ACCESS_KEY32 0x00000200

116 CONTEXT_HANDLE(winreg_handle) winreg_handle_t;

118 struct winreg_string_desc {
119     WORD length;
120     WORD allosize;
121     LPTSTR str;
122 };

```

_____unchanged_portion_omitted_____

new/usr/src/uts/common/smbdrv/netrauth.h

1

```
*****
4272 Sun Mar 18 01:13:23 2018
new/usr/src/uts/common/smbdrv/netrauth.h
1575 untangle libmlrpc ... (smbdrv)
*****
1 /*
2  * CDDL HEADER START
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25 * Copyright 2015 Nexenta Systems, Inc. All rights reserved.
26 */

28 #ifndef _SMBDRV_NETRAUTH_H
29 #define _SMBDRV_NETRAUTH_H

31 /*
32 * NETR remote authentication and logon services.
33 */

35 #include <sys/types.h>
36 #include <smb/wintypes.h>
36 #include <smbdrv/wintypes.h>
37 #include <smbdrv/netbios.h>
38 #include <smbdrv/smbinfo.h>
39 #include <netdb.h>

41 #ifdef __cplusplus
42 extern "C" {
43 #endif

45 /*
46 * See also netlogon.ndl.
47 */
48 #define NETR_WKSTA_TRUST_ACCOUNT_TYPE 0x02
49 #define NETR_DOMAIN_TRUST_ACCOUNT_TYPE 0x04

51 /*
52 * Negotiation flags for challenge/response authentication.
53 */
54 #define NETR_NEGOTIATE_BASE_FLAGS 0x000001FF
55 #define NETR_NEGOTIATE_STRONGKEY_FLAG 0x00004000

57 #define NETR_SESSKEY64_SZ 8
58 #define NETR_SESSKEY128_SZ 16
59 #define NETR_SESSKEY_MAXSZ NETR_SESSKEY128_SZ
60 #define NETR_CRED_DATA_SZ 8
```

new/usr/src/uts/common/smbdrv/netrauth.h

2

```
61 #define NETR_OWF_PASSWORD_SZ 16

63 /*
64 * SAM logon levels: interactive and network.
65 */
66 #define NETR_INTERACTIVE_LOGON 0x01
67 #define NETR_NETWORK_LOGON 0x02

69 /*
70 * SAM logon validation levels.
71 */
72 #define NETR_VALIDATION_LEVEL3 0x03

74 /*
75 * Most of these are from: "MSV1_0_LM20_LOGON structure"
76 * http://msdn.microsoft.com/en-us/library/windows/desktop/aa378762
77 * and a few are from the ntddk (ntmsv1_0.h) found many places.
78 */
79 #define MSV1_0_CLEARTEXT_PASSWORD_ALLOWED 0x00000002
80 #define MSV1_0_UPDATE_LOGON_STATISTICS 0x00000004
81 #define MSV1_0_RETURN_USER_PARAMETERS 0x00000008
82 #define MSV1_0_DONT_TRY_GUEST_ACCOUNT 0x00000010
83 #define MSV1_0_ALLOW_SERVER_TRUST_ACCOUNT 0x00000020
84 #define MSV1_0_RETURN_PASSWORD_EXPIRY 0x00000040
85 /*
86 * MSV1_0_USE_CLIENT_CHALLENGE means the LM response field contains the
87 * "client challenge" in the first 8 bytes instead of the LM response.
88 */
89 #define MSV1_0_USE_CLIENT_CHALLENGE 0x00000080
90 #define MSV1_0_TRY_GUEST_ACCOUNT_ONLY 0x00000100
91 #define MSV1_0_RETURN_PROFILE_PATH 0x00000200
92 #define MSV1_0_TRY_SPECIFIED_DOMAIN_ONLY 0x00000400
93 #define MSV1_0_ALLOW_WORKSTATION_TRUST_ACCOUNT 0x00000800
94 #define MSV1_0_DISABLE_PERSONAL_FALLBACK 0x00001000
95 #define MSV1_0_ALLOW_FORCE_GUEST 0x00002000
96 #define MSV1_0_CLEARTEXT_PASSWORD_SUPPLIED 0x00004000
97 #define MSV1_0_USE_DOMAIN_FOR_ROUTING_ONLY 0x00008000
98 #define MSV1_0_SUBAUTHENTICATION_DLL_EX 0x00100000

100 /*
101 * This is a duplicate of the netr_credential
102 * from netlogon.ndl.
103 */
104 typedef struct netr_cred {
105     BYTE data[NETR_CRED_DATA_SZ];
106 } netr_cred_t;
    _____
    unchanged portion omitted_
```

new/usr/src/uts/common/smbdrv/smb_door.h

1

```
*****
5170 Sun Mar 18 01:13:24 2018
new/usr/src/uts/common/smbdrv/smb_door.h
1575 untangle libmlrpc ... (smbdrv)
*****
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18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright (c) 2007, 2010, Oracle and/or its affiliates. All rights reserved.
23 * Copyright 2014 Nexenta Systems, Inc. All rights reserved.
24 */

26 #ifndef _SMBDRV_SMB_DOOR_H
27 #define _SMBDRV_SMB_DOOR_H

29 #include <sys/door.h>
30 #include <smb/wintypes.h>
30 #include <smbdrv/wintypes.h>
31 #include <smbdrv/smb_xdr.h>
32 #include <smbdrv/smb_token.h>

34 #ifdef __cplusplus
35 extern "C" {
36 #endif

38 #define SMBD_DOOR_NAME          "/var/run/smbd_door"

40 #define SMB_DOOR_CALL_RETRIES    3

42 /*
43  * Opcodes for smbd door.
44  *
45  * SMB_DR_NULL is the equivalent of the NULL RPC. It ensures that an
46  * opcode of zero is not misinterpreted as an operational door call
47  * and it is available as a test interface.
48  *
49  * SMB_DR_ASYNC_RESPONSE delivers the response part of an asynchronous
50  * request and must be processed as a synchronous request.
51  *
52  * See also: smb_doorhdr_opname()
53  */
54 typedef enum smb_dopcode {
55     SMB_DR_NULL = 0,
56     SMB_DR_ASYNC_RESPONSE,
57     SMB_DR_USER_AUTH_LOGON,
58     SMB_DR_USER_NONAUTH_LOGON,
59     SMB_DR_USER_AUTH_LOGOFF,
60     SMB_DR_LOOKUP_SID,
```

new/usr/src/uts/common/smbdrv/smb_door.h

2

```
61     SMB_DR_LOOKUP_NAME,
62     SMB_DR_JOIN,
63     SMB_DR_GET_DCINFO,
64     SMB_DR_VSS_GET_COUNT,
65     SMB_DR_VSS_GET_SNAPSHOTS,
66     SMB_DR_VSS_MAP_GMTTOKEN,
67     SMB_DR_ADS_FIND_HOST,
68     SMB_DR_QUOTA_QUERY,
69     SMB_DR_QUOTA_SET,
70     SMB_DR_DFS_GET_REFERRALS,
71     SMB_DR_SHR_HOSTACCESS,
72     SMB_DR_SHR_EXEC,
73     SMB_DR_NOTIFY_DC_CHANGED
74 } smb_dopcode_t;
_____ unchanged_portion_omitted
```

new/usr/src/uts/common/smb/srv/smb_privilege.h

1

```
*****
7232 Sun Mar 18 01:13:24 2018
new/usr/src/uts/common/smb/srv/smb_privilege.h
1575 untangle libmlrpc ... (smb/srv)
*****
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25 * Copyright 2014 Nexenta Systems, Inc. All rights reserved.
26 */

28 #ifndef _SMB_PRIVILEGE_H
29 #define _SMB_PRIVILEGE_H

31 #include <smb/wintypes.h>
31 #include <smb/srv/wintypes.h>

33 #ifdef __cplusplus
34 extern "C" {
35 #endif

37 /*
38  * Privileges
39  *
40  * Privileges apply to all objects and over-ride the access controls
41  * in an object's security descriptor in a manner specific to each
42  * privilege. Privileges are still not full defined. Privileges are
43  * defined in a set structure (LUID = Locally Unique Identifier).
44  *
45  * The default LUID, name and display names defined on NT 4.0 are:
46  * LUID Privilege Name Display Name
47  * ---- -
48  * 0:2 SeCreateTokenPrivilege Create a token object
49  * 0:3 SeAssignPrimaryTokenPrivilege Replace a process level token
50  * 0:4 SeLockMemoryPrivilege Lock pages in memory
51  * 0:5 SeIncreaseQuotaPrivilege Increase quotas
52  * 0:6 SeMachineAccountPrivilege Add workstations to domain
53  * 0:7 SeTcbPrivilege Act as part of the operating system
54  * 0:8 SeSecurityPrivilege Manage auditing and security log
55  * 0:9 SeTakeOwnershipPrivilege Take ownership of files or other objects
56  * 0:10 SeLoadDriverPrivilege Load and unload device drivers
57  * 0:11 SeSystemProfilePrivilege Profile system performance
58  * 0:12 SeSystemTimePrivilege Change the system time
59  * 0:13 SeProfileSingleProcessPrivilege Profile single process
60  * 0:14 SeIncreaseBasePriorityPrivilege Increase scheduling priority
```

new/usr/src/uts/common/smb/srv/smb_privilege.h

2

```
61 * 0:15 SeCreatePagefilePrivilege Create a pagefile
62 * 0:16 SeCreatePermanentPrivilege Create permanent shared objects
63 * 0:17 SeBackupPrivilege Back up files and directories
64 * 0:18 SeRestorePrivilege Restore files and directories
65 * 0:19 SeShutdownPrivilege Shut down the system
66 * 0:20 SeDebugPrivilege Debug programs
67 * 0:21 SeAuditPrivilege Generate security audits
68 * 0:22 SeSystemEnvironmentPrivilege Modify firmware environment values
69 * 0:23 SeChangeNotifyPrivilege Bypass traverse checking
70 * 0:24 SeRemoteShutdownPrivilege Force shutdown from a remote system
71 */

73 /*
74  * Privilege names
75 */
76 #define SE_CREATE_TOKEN_NAME "SeCreateTokenPrivilege"
77 #define SE_ASSIGNPRIMARYTOKEN_NAME "SeAssignPrimaryTokenPrivilege"
78 #define SE_LOCK_MEMORY_NAME "SeLockMemoryPrivilege"
79 #define SE_INCREASE_QUOTA_NAME "SeIncreaseQuotaPrivilege"
80 #define SE_UNSOLICITED_INPUT_NAME "SeUnsolicitedInputPrivilege"
81 #define SE_MACHINE_ACCOUNT_NAME "SeMachineAccountPrivilege"
82 #define SE_TCB_NAME "SeTcbPrivilege"
83 #define SE_SECURITY_NAME "SeSecurityPrivilege"
84 #define SE_TAKE_OWNERSHIP_NAME "SeTakeOwnershipPrivilege"
85 #define SE_LOAD_DRIVER_NAME "SeLoadDriverPrivilege"
86 #define SE_SYSTEM_PROFILE_NAME "SeSystemProfilePrivilege"
87 #define SE_SYSTEMTIME_NAME "SeSystemTimePrivilege"
88 #define SE_PROF_SINGLE_PROCESS_NAME "SeProfileSingleProcessPrivilege"
89 #define SE_INC_BASE_PRIORITY_NAME "SeIncreaseBasePriorityPrivilege"
90 #define SE_CREATE_PAGEFILE_NAME "SeCreatePagefilePrivilege"
91 #define SE_CREATE_PERMANENT_NAME "SeCreatePermanentPrivilege"
92 #define SE_BACKUP_NAME "SeBackupPrivilege"
93 #define SE_RESTORE_NAME "SeRestorePrivilege"
94 #define SE_SHUTDOWN_NAME "SeShutdownPrivilege"
95 #define SE_DEBUG_NAME "SeDebugPrivilege"
96 #define SE_AUDIT_NAME "SeAuditPrivilege"
97 #define SE_SYSTEM_ENVIRONMENT_NAME "SeSystemEnvironmentPrivilege"
98 #define SE_CHANGE_NOTIFY_NAME "SeChangeNotifyPrivilege"
99 #define SE_REMOTE_SHUTDOWN_NAME "SeRemoteShutdownPrivilege"

101 #define SE_MIN_LUID 2
102 #define SE_CREATE_TOKEN_LUID 2
103 #define SE_ASSIGNPRIMARYTOKEN_LUID 3
104 #define SE_LOCK_MEMORY_LUID 4
105 #define SE_INCREASE_QUOTA_LUID 5
106 #define SE_MACHINE_ACCOUNT_LUID 6
107 #define SE_TCB_LUID 7
108 #define SE_SECURITY_LUID 8
109 #define SE_TAKE_OWNERSHIP_LUID 9
110 #define SE_LOAD_DRIVER_LUID 10
111 #define SE_SYSTEM_PROFILE_LUID 11
112 #define SE_SYSTEMTIME_LUID 12
113 #define SE_PROF_SINGLE_PROCESS_LUID 13
114 #define SE_INC_BASE_PRIORITY_LUID 14
115 #define SE_CREATE_PAGEFILE_LUID 15
116 #define SE_CREATE_PERMANENT_LUID 16
117 #define SE_BACKUP_LUID 17
118 #define SE_RESTORE_LUID 18
119 #define SE_SHUTDOWN_LUID 19
120 #define SE_DEBUG_LUID 20
121 #define SE_AUDIT_LUID 21
122 #define SE_SYSTEM_ENVIRONMENT_LUID 22
123 #define SE_CHANGE_NOTIFY_LUID 23
124 #define SE_REMOTE_SHUTDOWN_LUID 24
125 #define SE_MAX_LUID 24
```

```
127 /*
128  * Privilege attributes
129  */
130 #define SE_PRIVILEGE_DISABLED          0x00000000
131 #define SE_PRIVILEGE_ENABLED_BY_DEFAULT 0x00000001
132 #define SE_PRIVILEGE_ENABLED          0x00000002
133 #define SE_PRIVILEGE_USED_FOR_ACCESS  0x80000000

135 /*
136  * Privilege Set Control flags
137  */
138 #define PRIVILEGE_SET_ALL_NECESSARY    1

140 /*
141  * Local User ID (an NT thing, not a Unix UID)
142  * See also: smb_luid_xdr()
143  */
144 typedef struct smb_luid {
145     uint32_t lo_part;
146     uint32_t hi_part;
147 } smb_luid_t;
_____unchanged_portion_omitted_____
```

new/usr/src/uts/common/smb/smb_share.h

1

```
*****
8222 Sun Mar 18 01:13:24 2018
new/usr/src/uts/common/smb/smb_share.h
1575 untangle libmlrpc ... (smb/srv)
*****
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26 */

28 #ifndef _SMB_SHARE_H
29 #define _SMB_SHARE_H

31 #include <sys/param.h>
32 #include <smb/lmerr.h>
33 #include <smb/wintypes.h>
34 #include <smb/srv/string.h>
35 #include <smb/srv/smb_inet.h>
36 #include <smb/srv/hash_table.h>
37 #include <smb/srv/wintypes.h>
38 #include <smb/lmerr.h>

38 #if !defined(_KERNEL) && !defined(_FAKE_KERNEL)
39 #include <libshare.h>
40 #endif

42 #ifdef __cplusplus
43 extern "C" {
44 #endif

46 #define SMB_CVOL                "/var/smb/cvol"
47 #define SMB_SYSROOT             SMB_CVOL "/windows"
48 #define SMB_SYSTEM32            SMB_SYSROOT "/system32"
49 #define SMB_VSS                 SMB_SYSTEM32 "/vss"

51 /* Exported named pipes are in... */
52 #define SMB_PIPE_DIR            "/var/smb/pipe"

54 /*
55  * Share Properties:
56  *
57  * name                Advertised name of the share
58  *
59  * ad-container        Active directory container in which the share
```

new/usr/src/uts/common/smb/smb_share.h

2

```
60 *
61 *
62 * abe                Determines whether Access Based Enumeration is applied
63 *                   to a share
64 *
65 * csc                Client-side caching (CSC) options applied to this share
66 *                   disabled The client MUST NOT cache any files
67 *                   manual   The client should not automatically cache every file
68 *                   auto     that it opens
69 *                   vdo      The client may cache every file that it opens
70 *                   vdo      The client may cache every file that it opens
71 *                   vdo      and satisfy file requests from its local cache.
72 *
73 * catia              CATIA character substitution
74 *
75 * guestok            Determines whether guest access is allowed
76 *
77 * next three properties use access-list a al NFS
78 *
79 * ro                 list of hosts that will have read-only access
80 * rw                 list of hosts that will have read/write access
81 * none              list of hosts that won't be allowed access
82 */
83 #define SHOPT_AD_CONTAINER    "ad-container"
84 #define SHOPT_ABE            "abe"
85 #define SHOPT_NAME          "name"
86 #define SHOPT_CSC           "csc"
87 #define SHOPT_CATIA         "catia"
88 #define SHOPT_GUEST         "guestok"
89 #define SHOPT_RO            "ro"
90 #define SHOPT_RW            "rw"
91 #define SHOPT_NONE          "none"
92 #define SHOPT_DFSROOT       "dfsroot"
93 #define SHOPT_DESCRIPTION    "description"

95 #define SMB_DEFAULT_SHARE_GROUP "smb"
96 #define SMB_PROTOCOL_NAME      "smb"

98 /*
99  * RAP protocol share related commands only understand
100 * share names in OEM format and there is a 13 char size
101 * limitation
102 */
103 #define SMB_SHARE_OEMNAME_MAX    13
104 #define SMB_SHARE_NTNAME_MAX    81
105 #define SMB_SHARE_CMNT_MAX      (64 * MTS_MB_CHAR_MAX)

107 /*
108  * struct SHARE_INFO_1 {
109  *     char                shil_netname[13]
110  *     char                shil_pad;
111  *     unsigned short      shil_type
112  *     char                *shil_remark;
113  * }
114 */
115 #define SHARE_INFO_1_SIZE      (SMB_SHARE_OEMNAME_MAX + 1 + 2 + 4)

117 /*
118  * Share flags:
119  *
120  * There are two types of flags:
121  *
122  * - flags that represent a share property
123  * - other flags set at runtime
124  *
125  * Property flags:
```

```

126 *
127 * SMB_SHRF_CSC_DISABLED      Client-side caching is disabled for this share
128 * SMB_SHRF_CSC_MANUAL      Manual client-side caching is allowed
129 * SMB_SHRF_CSC_AUTO        Automatic client-side caching (CSC) is allowed
130 * SMB_SHRF_CSC_VDO        Automatic CSC and local cache lookup is allowed
131 * SMB_SHRF_ACC_OPEN        No restrictions set
132 * SMB_SHRF_ACC_NONE        "none" property set
133 * SMB_SHRF_ACC_RO          "ro" (readonly) property set
134 * SMB_SHRF_ACC_RW          "rw" (read/write) property set
135 * SMB_SHRF_ACC_ALL        All of the access bits
136 * SMB_SHRF_CATIA          CATIA character translation on/off
137 * SMB_SHRF_GUEST_OK        Guest access on/off
138 * SMB_SHRF_ABE            Access Based Enumeration on/off
139 * SMB_SHRF_DFSROOT        Share is a standalone DFS root
140 *
141 * Runtime flags:
142 *
143 * SMB_SHRF_TRANS          Transient share
144 * SMB_SHRF_PERM          Permanent share
145 * SMB_SHRF_AUTOHOME        Autohome share.
146 * SMB_SHRF_ADMIN          Admin share
147 *
148 * All autohome shares are transient but not all transient shares are autohome.
149 * IPC$ and drive letter shares (e.g. d$, e$, etc) are transient but
150 * not autohome.
151 */

153 /*
154 * Property flags
155 */
156 #define SMB_SHRF_DFSROOT      0x0001
157 #define SMB_SHRF_CATIA        0x0002
158 #define SMB_SHRF_GUEST_OK     0x0004
159 #define SMB_SHRF_ABE          0x0008

161 #define SMB_SHRF_CSC_DISABLED 0x0010
162 #define SMB_SHRF_CSC_MANUAL   0x0020
163 #define SMB_SHRF_CSC_AUTO     0x0040
164 #define SMB_SHRF_CSC_VDO     0x0080
165 #define SMB_SHRF_CSC_MASK     0x00F0

167 #define SMB_SHRF_ACC_OPEN     0x0000
168 #define SMB_SHRF_ACC_NONE     0x0100
169 #define SMB_SHRF_ACC_RO       0x0200
170 #define SMB_SHRF_ACC_RW       0x0400
171 #define SMB_SHRF_ACC_ALL      0x0F00

173 /*
174 * Runtime flags
175 */
176 #define SMB_SHRF_ADMIN         0x01000000
177 #define SMB_SHRF_TRANS         0x10000000
178 #define SMB_SHRF_PERM         0x20000000
179 #define SMB_SHRF_AUTOHOME     0x40000000

181 #define SMB_SHARE_PRINT        "print$"
182 #define SMB_SHARE_PRINT_LEN    6
183 /*
184 * refcnt is currently only used for autohome. autohome needs a refcnt
185 * because a user can map their autohome share from more than one client
186 * at the same time and the share should only be removed when the last
187 * one is disconnected
188 */
189 typedef struct smb_share {
190     char      shr_name[MAXNAMELEN];
191     char      shr_path[MAXPATHLEN];

```

```

192     char      shr_cmnt[SMB_SHARE_CMNT_MAX];
193     char      shr_container[MAXPATHLEN];
194     uint32_t  shr_flags;
195     uint32_t  shr_type;
196     uint32_t  shr_refcnt;
197     uint32_t  shr_access_value; /* host return access value */
198     uid_t     shr_uid; /* autohome only */
199     gid_t     shr_gid; /* autohome only */
200     char      shr_access_none[MAXPATHLEN];
201     char      shr_access_ro[MAXPATHLEN];
202     char      shr_access_rw[MAXPATHLEN];
203 } smb_share_t;

```

unchanged portion omitted

new/usr/src/uts/common/smb/srv/smb_sid.h

1

```
*****
10353 Sun Mar 18 01:13:24 2018
new/usr/src/uts/common/smb/srv/smb_sid.h
1575 untangle libmlrpc ... (smb/srv)
*****
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17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright (c) 2007, 2010, Oracle and/or its affiliates. All rights reserved.
23 * Copyright 2014 Nexenta Systems, Inc. All rights reserved.
24 */

26 #ifndef _SMB_SID_H
27 #define _SMB_SID_H

29 /*
30 * Security Identifier (SID) interface definition.
31 */
32 #include <smb/wintypes.h>
32 #include <smb/srv/wintypes.h>

34 #ifdef __cplusplus
35 extern "C" {
36 #endif

38 /*
39 * Predefined global user RIDs.
40 */
41 #define DOMAIN_USER_RID_ADMIN (0x000001F4L) /* 500 */
42 #define DOMAIN_USER_RID_GUEST (0x000001F5L) /* 501 */
43 #define DOMAIN_USER_RID_KRBTGT (0x000001F6L) /* 502 */

45 /*
46 * Predefined global group RIDs.
47 */
48 #define DOMAIN_GROUP_RID_ADMINS (0x00000200L) /* 512 */
49 #define DOMAIN_GROUP_RID_USERS (0x00000201L) /* 513 */
50 #define DOMAIN_GROUP_RID_GUESTS (0x00000202L) /* 514 */
51 #define DOMAIN_GROUP_RID_COMPUTERS (0x00000203L) /* 515 */
52 #define DOMAIN_GROUP_RID_CONTROLLERS (0x00000204L) /* 516 */
53 #define DOMAIN_GROUP_RID_CERT_ADMINS (0x00000205L) /* 517 */
54 #define DOMAIN_GROUP_RID_SCHEMA_ADMINS (0x00000206L) /* 518 */
55 #define DOMAIN_GROUP_RID_EP_ADMINS (0x00000207L) /* 519 */
56 #define DOMAIN_GROUP_RID_GP_CREATOR (0x00000208L) /* 520 */

59 /*
60 * Predefined local alias RIDs.
```

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```
61 */
62 #define DOMAIN_ALIAS_RID_ADMINS (0x00000220L) /* 544 */
63 #define DOMAIN_ALIAS_RID_USERS (0x00000221L)
64 #define DOMAIN_ALIAS_RID_GUESTS (0x00000222L)
65 #define DOMAIN_ALIAS_RID_POWER_USERS (0x00000223L)
66 #define DOMAIN_ALIAS_RID_ACCOUNT_OPS (0x00000224L)
67 #define DOMAIN_ALIAS_RID_SYSTEM_OPS (0x00000225L)
68 #define DOMAIN_ALIAS_RID_PRINT_OPS (0x00000226L)
69 #define DOMAIN_ALIAS_RID_BACKUP_OPS (0x00000227L)
70 #define DOMAIN_ALIAS_RID_REPLICATOR (0x00000228L)

73 /*
74 * Universal and NT well-known SIDs
75 */
76 #define NT_NULL_AUTH_SIDSTR "S-1-0"
77 #define NT_NULL_SIDSTR "S-1-0-0"
78 #define NT_WORLD_AUTH_SIDSTR "S-1-1"
79 #define NT_WORLD_SIDSTR "S-1-1-0"
80 #define NT_LOCAL_AUTH_SIDSTR "S-1-2"
81 #define NT_LOCAL_SIDSTR "S-1-2-0"
82 #define NT_CREATOR_AUTH_SIDSTR "S-1-3"
83 #define NT_CREATOR_OWNER_ID_SIDSTR "S-1-3-0"
84 #define NT_CREATOR_GROUP_ID_SIDSTR "S-1-3-1"
85 #define NT_CREATOR_OWNER_SERVER_ID_SIDSTR "S-1-3-2"
86 #define NT_CREATOR_GROUP_SERVER_ID_SIDSTR "S-1-3-3"
87 #define NT_OWNER_RIGHTS_SIDSTR "S-1-3-4"
88 #define NT_GROUP_RIGHTS_SIDSTR "S-1-3-5"
89 #define NT_NON_UNIQUE_IDS_SIDSTR "S-1-4"
90 #define NT_AUTHORITY_SIDSTR "S-1-5"
91 #define NT_DIALUP_SIDSTR "S-1-5-1"
92 #define NT_NETWORK_SIDSTR "S-1-5-2"
93 #define NT_BATCH_SIDSTR "S-1-5-3"
94 #define NT_INTERACTIVE_SIDSTR "S-1-5-4"
95 #define NT_LOGON_SESSION_SIDSTR "S-1-5-5"
96 #define NT_SERVICE_SIDSTR "S-1-5-6"
97 #define NT_ANONYMOUS_LOGON_SIDSTR "S-1-5-7"
98 #define NT_PROXY_SIDSTR "S-1-5-8"
99 #define NT_SERVER_LOGON_SIDSTR "S-1-5-9"
100 #define NT_SELF_SIDSTR "S-1-5-10"
101 #define NT_AUTHENTICATED_USER_SIDSTR "S-1-5-11"
102 #define NT_RESTRICTED_CODE_SIDSTR "S-1-5-12"
103 #define NT_TERMINAL_SERVER_SIDSTR "S-1-5-13"
104 #define NT_LOCAL_SYSTEM_SIDSTR "S-1-5-18"
105 #define NT_NON_UNIQUE_SIDSTR "S-1-5-21"
106 #define NT_BUILTIN_DOMAIN_SIDSTR "S-1-5-32"
107 #define NT_BUILTIN_CURRENT_OWNER_SIDSTR "S-1-5-32-766"
108 #define NT_BUILTIN_CURRENT_GROUP_SIDSTR "S-1-5-32-767"

111 /*
112 * SID type indicators (SID_NAME_USE).
113 */
114 #define SidTypeNull 0
115 #define SidTypeUser 1
116 #define SidTypeGroup 2
117 #define SidTypeDomain 3
118 #define SidTypeAlias 4
119 #define SidTypeWellKnownGroup 5
120 #define SidTypeDeletedAccount 6
121 #define SidTypeInvalid 7
122 #define SidTypeUnknown 8
123 #define SidTypeComputer 9
124 #define SidTypeLabel 10
```



```

127 /*
128 * Identifier authorities for various domains.
129 */
130 #define NT_SID_NULL_AUTH          0
131 #define NT_SID_WORLD_AUTH         1
132 #define NT_SID_LOCAL_AUTH        2
133 #define NT_SID_CREATOR_AUTH      3
134 #define NT_SID_NON_UNIQUE_AUTH   4
135 #define NT_SID_NT_AUTH           5

138 #define NT_SECURITY_NULL_AUTH    {0, 0, 0, 0, 0, 0}
139 #define NT_SECURITY_WORLD_AUTH   {0, 0, 0, 0, 0, 1}
140 #define NT_SECURITY_LOCAL_AUTH   {0, 0, 0, 0, 0, 2}
141 #define NT_SECURITY_CREATOR_AUTH {0, 0, 0, 0, 0, 3}
142 #define NT_SECURITY_NON_UNIQUE_AUTH {0, 0, 0, 0, 0, 4}
143 #define NT_SECURITY_NT_AUTH      {0, 0, 0, 0, 0, 5}
144 #define NT_SECURITY_UNIX_AUTH    {0, 0, 0, 0, 0, 99}

147 #define SECURITY_NULL_RID        (0x00000000L)
148 #define SECURITY_WORLD_RID       (0x00000000L)
149 #define SECURITY_LOCAL_RID       (0x00000000L)

151 #define SECURITY_CREATOR_OWNER_RID (0x00000000L)
152 #define SECURITY_CREATOR_GROUP_RID (0x00000001L)
153 #define SECURITY_CREATOR_OWNER_SERVER_RID (0x00000002L)
154 #define SECURITY_CREATOR_GROUP_SERVER_RID (0x00000003L)
155 #define SECURITY_OWNER_RIGHTS_RID (0x00000004L)
156 #define SECURITY_GROUP_RIGHTS_RID (0x00000005L)
157 #define SECURITY_CURRENT_OWNER_RID (0x000002FEL)
158 #define SECURITY_CURRENT_GROUP_RID (0x000002FFL)

160 #define SECURITY_DIALUP_RID       (0x00000001L)
161 #define SECURITY_NETWORK_RID      (0x00000002L)
162 #define SECURITY_BATCH_RID        (0x00000003L)
163 #define SECURITY_INTERACTIVE_RID (0x00000004L)
164 #define SECURITY_LOGON_IDS_RID    (0x00000005L)
165 #define SECURITY_LOGON_IDS_RID_COUNT (3L)
166 #define SECURITY_SERVICE_RID      (0x00000006L)
167 #define SECURITY_ANONYMOUS_LOGON_RID (0x00000007L)
168 #define SECURITY_PROXY_RID        (0x00000008L)
169 #define SECURITY_ENTERPRISE_CONTROLLERS_RID (0x00000009L)
170 #define SECURITY_SERVER_LOGON_RID SECURITY_ENTERPRISE_CONTROLLERS_RID
171 #define SECURITY_PRINCIPAL_SELF_RID (0x0000000AL)
172 #define SECURITY_AUTHENTICATED_USER_RID (0x0000000BL)
173 #define SECURITY_RESTRICTED_CODE_RID (0x0000000CL)

175 #define SECURITY_LOCAL_SYSTEM_RID (0x00000012L)
176 #define SECURITY_NT_NON_UNIQUE (0x00000015L)
177 #define SECURITY_BUILTIN_DOMAIN_RID (0x00000020L)

180 #define NT_SID_NON_UNIQUE_SUBAUTH 21

183 /*
184 * Common definition for a SID.
185 */
186 #define NT_SID_REVISION          1
187 #define NT_SID_AUTH_MAX         6
188 #define NT_SID_SUBAUTH_MAX      15

191 /*
192 * Security Identifier (SID)

```

```

193 *
194 * The security identifier (SID) uniquely identifies a user, group or
195 * a domain. It consists of a revision number, the identifier authority,
196 * and a list of sub-authorities. The revision number is currently 1.
197 * The identifier authority identifies which system issued the SID. The
198 * sub-authorities of a domain SID uniquely identify a domain. A user
199 * or group SID consists of a domain SID with the user or group id
200 * appended. The user or group id (also known as a relative id (RID)
201 * uniquely identifies a user within a domain. A user or group SID
202 * uniquely identifies a user or group across all domains. The SidType
203 * values identify the various types of SID.
204 *
205 *      1 1 1 1 1 1
206 *      5 4 3 2 1 0 9 8 7 6 5 4 3 2 1 0
207 *
208 * |-----|-----|-----|
209 * | SubAuthorityCount |Reserved1 (SBZ)| Revision |
210 * |-----|-----|-----|
211 * | IdentifierAuthority[0] |
212 * |-----|-----|-----|
213 * | IdentifierAuthority[1] |
214 * |-----|-----|-----|
215 * | IdentifierAuthority[2] |
216 * |-----|-----|-----|
217 * | SubAuthority[] |
218 * |-----|-----|-----|
219 *
220 *
221 */
222 /*
223 * Note: NT defines the Identifier Authority as a separate
224 * structure (SID_IDENTIFIER_AUTHORITY) containing a literal
225 * definition of a 6 byte vector but the effect is the same
226 * as defining it as a member value.
227 * See also: smb_sid_xdr()
228 */
229 typedef struct smb_sid {
230     uint8_t sid_revision;
231     uint8_t sid_subauthcnt;
232     uint8_t sid_authority[NT_SID_AUTH_MAX];
233     uint32_t sid_subauth[ANY_SIZE_ARRAY];
234 } smb_sid_t;

```

unchanged portion omitted

new/usr/src/uts/common/smb/rv/smb_xdr.h

1

```
*****
10025 Sun Mar 18 01:13:24 2018
new/usr/src/uts/common/smb/rv/smb_xdr.h
1575 untangle libmlrpc ... (smb/rv)
*****
1 /*
2  * CDDL HEADER START
3  *
4  * The contents of this file are subject to the terms of the
5  * Common Development and Distribution License (the "License").
6  * You may not use this file except in compliance with the License.
7  *
8  * You can obtain a copy of the license at usr/src/OPENSOLARIS.LICENSE
9  * or http://www.opensolaris.org/os/licensing.
10 * See the License for the specific language governing permissions
11 * and limitations under the License.
12 *
13 * When distributing Covered Code, include this CDDL HEADER in each
14 * file and include the License file at usr/src/OPENSOLARIS.LICENSE.
15 * If applicable, add the following below this CDDL HEADER, with the
16 * fields enclosed by brackets "[]" replaced with your own identifying
17 * information: Portions Copyright [yyyy] [name of copyright owner]
18 *
19 * CDDL HEADER END
20 */
21 /*
22 * Copyright (c) 2007, 2010, Oracle and/or its affiliates. All rights reserved.
23 * Copyright 2015 Nexenta Systems, Inc. All rights reserved.
24 */

26 #ifndef _SMBRV_SMB_XDR_H
27 #define _SMBRV_SMB_XDR_H

29 #ifdef __cplusplus
30 extern "C" {
31 #endif

33 #include <rpc/xdr.h>
34 #include <sys/param.h>
35 #include <sys/avl.h>
36 #include <sys/list.h>
37 #include <smb/wintypes.h>
38 #include <smb/rv/wintypes.h>
39 #include <smb/rv/smb_sid.h>
40 #include <smb/rv/smbinfo.h>
41 #include <smb/rv/smb_ioctl.h>
42 #include <smb/rv/smb_share.h>
43 #include <smb/rv/smb_dfs.h>
44 #include <smb/rv/wintypes.h>

45 #if defined(_KERNEL) || defined(_FAKE_KERNEL)
46 #include <sys/sysmacros.h>
47 #define xdr_int8_t      xdr_char
48 #define xdr_uint8_t     xdr_u_char
49 #define xdr_int16_t     xdr_short
50 #define xdr_uint16_t    xdr_u_short
51 #else /* _KERNEL */
52 #include <stddef.h>     /* offsetof */
53 #endif /* _KERNEL */

55 /*
56  * null-terminated string
57  * See also: smb_string_xdr()
58  */
59 typedef struct smb_string {
```

new/usr/src/uts/common/smb/rv/smb_xdr.h

2

```
60         char *buf;
61     } smb_string_t;
_____unchanged_portion_omitted_
```