

Subject: HP Migration: Moving DCE DTS Servers to SUN

05/16/01

This Engineering Technical Directive (ETD) is issued to all DAACs and labs on the ECS Project. The project has decommissioned HP workstations from the ECS Baseline, thus resulting in the migration of all HP COTS applications to the SUN Solaris 2.5.1 workstations. Each DAAC site DCE cell has at least one HP DCE client that is configured as a DTS Server. By default the HP DCE client assumes the “role” of Backup DCE DTS (Directory Time Services) Courier in a configured DCE cell.

Issue:

Removal of the HP DCE Client causes the DTS configuration of time servers to decrement the number of required servers. The HP DCE DTS configured client serves as the backup to the primary courier in the DCE cell. It is the courier’s role to update all DTS Servers in the DCE cell. When the primary courier goes down, or is unable to synchronize the server clocks, the backup takes over. It is imperative that a DCE DTS backup courier be configured in the DCE cell.

Fix:

To resolve this problem, the role of backup courier will be migrated to a SUN DCE client. The AIS Workstation will replace the MSS Server as the designated DTS Backup Courier at all sites.

(Reference: ECS Configuration Management Baseline Technical Documents)

910-TDA-003	COTS Software Version Baseline Report
920-TDG-002	GSFC Hardware Software Map
920-TDG-003	GSFC Systems Infrastructure
920-TDE-002	EDC Hardware Software Map
920-TDE-003	EDC Systems Infrastructure
920-TDN-002	NSIDC Hardware Software Map
920-TDN-003	NSIDC Systems Infrastructure
920-TDL-002	LaRC Hardware Software Map
920-TDL-003	LaRC Systems Infrastructure
920-TDV-002	VATC Hardware Software Map
920-TDV-003	VATC Systems Infrastructure
920-TDP-002	PVC Hardware Software Map
920-TDP-003	PVC Systems Infrastructure

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05/16/01**Implementation:**

This technical directive should be implemented along with the HP Migration Upgrade PSR document.

The following are the procedures required to configure a DTS Time Server on a SUN DCE client:

- 1) Login in as root by typing the following:.

```
# su - &
```

- 2) Login in as cell_admin by typing the following:

```
# dce_login cell_admin &
```

```
Enter Password: 3
```

- 3) **dce_login cell_admin &**

```
Enter Password: 3
```

- 4) Display the configured timeservers by typing the following:

```
# dcecp -c rpeprofile list ./:/lan-profile &
```

```
./../testcell.hitc.com/hosts/astoria/dts-entity
```

```
./../testcell.hitc.com/hosts/godzilla/dts-entity
```

```
./../testcell.hitc.com/hosts/mohawk/dts-entity
```

```
./../testcell.hitc.com/hosts/rootbeer/dts-entity
```

```
./../testcell.hitc.com/hosts/yakusaka/dts-entity
```

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```
# dcecp -c dts show ?
{checkinterval +0-01:30:00.000I-----}
{epoch 0}
{tolerance +0-00:05:00.000I-----}
{tdf -0-05:00:00.000I-----}
{maxinaccuracy +0-00:00:00.100I-----}
{minservers 3}
{queryattempts 3}
{localtimeout +0-00:00:05.000I-----}
{globaltimeout +0-00:00:15.000I-----}
{syncinterval +0-00:02:00.000I-----}
{type server}
{courierrole noncourier} (depicts role of time server)
{actcourierrole noncourier}
{clockadjrate 10000000 nsec/sec}
{maxdriftrate 1000000 nsec/sec}
{clockresolution 10000000 nsec}
{version V1.0.1}
{timerep V1.0.0}
{provider no}
{autotdfchange no}
{nexttdfchange 2000-04-02-03:00:00.000-04:00I0.000}
{serverprincipal hosts/astoria/self}
{serverentry hosts/astoria/dts-entity}
{servergroup subsys/dce/dts-servers}
{status enabled}
{uuid 00004e25-a4d0-21d2-ad00-9b9d6335aa77}
{localservers
{name ../../testcell.hitc.com/hosts/yakusaka/self}
{timelastpolled 2000-02-10-17:21:38.330-05:00I0.398}
{lastobstime 2000-02-10-17:21:38.235-05:00I0.444}
{lastobsskew +0-00:00:00.094I0.841}
{inlastsync TRUE}
{transport RPC}}
{localservers
{name ../../testcell.hitc.com/hosts/mohawk/self}
{timelastpolled 2000-02-10-17:21:38.330-05:00I0.398}
{lastobstime 2000-02-10-17:21:38.276-05:00I0.446}
{lastobsskew +0-00:00:00.054I0.844}
{inlastsync TRUE}
```

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{transport RPC}}

{localservers

{name ../../testcell.hitc.com/hosts/godzilla/self}

{timelastpolled 2000-02-10-17:21:38.330-05:00I0.398}

{lastobstime 2000-02-10-17:21:38.285-05:00I0.398}

{lastobsskew +0-00:00:00.044I0.796}

{inlastsync TRUE}

{transport RPC}}

{localservers

{name ../../testcell.hitc.com/hosts/rootbeer/self}

{timelastpolled 2000-02-10-17:21:38.330-05:00I0.398}

{lastobstime 2000-02-10-17:21:38.270-05:00I0.374}

{lastobsskew +0-00:00:00.060I0.771}

{inlastsync TRUE}

{transport RPC}}

5) To Unconfigure HP

(The HP client should be unconfigured from the cell before configuring the new DTS Server.)

a) Unreplicate HP Client by typing the following:

```
# /opt/dcelocal/bin/dcecp -c directory delete ./:/hosts/machineto unreplicate/ -replica -clearinghouse ./:/replica_ch
```

b) Unconfig Client by typing the following:

```
# /etc/dce_config
```

(select #4 to unconfigure, then #5 to remove the DCE client)

6) To configure the DTS Server (SUN) type the following:

```
# /etc/dcesetup config_dtsserver ?
```

Cell Administrator's account name: (<string>, q, ?) [cell_admin] **cell_admin**

cell_admin's password:

Type of DTS server configuration (local or global): (<string>, q, ?) [local] **local**

Further DTS server configuration for this machine (none, courier, backupcourier, or timeprovider): (<string>, q, ?) [none] **backupcourier**

Type of Time Provider to use (null or ntp): (<string>, q, ?) [null] **ntp**

NTP Provider hostname: (<string>, q, ?) **128.156.1.43** (*use host name or ip address of external time source*)

Authenticating as cell_admin.

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Deactivating and stopping DTS
Executing "dcecp -c dts deactivate; dts stop"
Reauthenticating to pick up new DTS group membership.
Deactivating secval service
Removing /opt/dcelocal/var/security/creds/dcecred_ffffff* files.

Activating secval service
Authenticating as cell_admin.
Starting process dtsd
Synchronizing (skulking) cds directory /.:
Authenticating as cell_admin.
Starting process dts_ntp_provider
dcesetup succeeded.

8) Synchronize all Time Servers and clients by typing the following:.

dcecp -c dts synch -abrutely &

- 8) Verify the new configuration # **dcecp -c dts cat &**
/.../testcell.hitc.com/hosts/astoria/dts-entity
/.../testcell.hitc.com/hosts/godzilla/dts-entity
/.../testcell.hitc.com/hosts/mohawk/dts-entity
/.../testcell.hitc.com/hosts/rootbeer/dts-entity
/.../testcell.hitc.com/hosts/yakusaka/dts-entity

9) Confirm DTS Server communications:

dtscp show local servers &

The DTS control program is not authenticated:
No currently established network identity for which context
exists (dce / sec)

Known Servers

```
=====
Local /.../testcell.hitc.com/hosts/rootbeer/self
Last Time Polled = 2001-03-12-12:26:40.612-05:00I0.784
Last Observed Time = 2001-03-12-12:26:40.701-05:00I0.706
Last Observed Skew = +0-00:00:00.089I1.489
Used in Last Synchronization = TRUE
Transport Type = RPC

Local /.../testcell.hitc.com/hosts/astoria/self
Last Time Polled = 2001-03-12-12:26:40.612-05:00I0.784
Last Observed Time = 2001-03-12-12:26:40.759-05:00I0.680
```

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Last Observed Skew = +0-00:00:00.147I1.463
Used in Last Synchronization = TRUE
Transport Type = RPC

Local /.../testcell.hitc.com/hosts/mohawk/self

Last Time Polled = 2001-03-12-12:26:40.612-05:00I0.784
Last Observed Time = 2001-03-12-12:26:40.730-05:00I0.721
Last Observed Skew = +0-00:00:00.118I1.504
Used in Last Synchronization = TRUE
Transport Type = RPC

Testing:

Testing was been completed at the Landover EDF (idgcell.hitc.com) in March 2001.

Point of Contact:

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Reference CCR: 01-0299

-----End of Directive-----