

**STATE DATA CENTER 2009-2011 RATE MODEL
ADMINISTRATIVE OVERHEAD**

SERVICE AREA DESCRIPTION:

Administration is made up of the Administration staff, Plans and Controls, Operations, and Security.

METHODOLOGY:

Administration costs were distributed to the service areas based on FTE except for those direct costs that are associated with the service area. The objective is to work toward a model that allocates administration expenses to service areas when the data is available.

FACTORS THAT DROVE CHANGES IN RATE:

The primary drivers for the 2009-11 rate changes were:

- Changed methodology for allocating SDC floor space and building rent. The Finance Committee adopted a cost distribution model that applies different rates to the computing and non-computing areas. The computing area consists of the raised floor (15,691 sq. ft.) and infrastructure areas (10,635 sq. ft.). These areas were allocated to the service areas and a rate applied. The remaining non-computing floor space (office areas, hallways, conference rooms, etc.) (19,475 sq. ft.) is allocated based on occupancy.
- The State Data Center is a self support building and all facilities-related expenses (repairs, maintenance, yard service, etc.) are paid solely by State Data Center. An increase of \$809,849 was made to the SDC rent calculations for expenses not previously included in the rent forecast. Rent calculations for the raised floor and infrastructure area are based on the following square footage occupied by specific domains:

Domain	Footprint (in square feet)	Percentage
Storage Systems	2,560	34.97
Distributed Systems	2,992	40.87%
Mainframe System	168	2.30%
Midrange Systems	1,600	21.86%
Total	7,320	100.00%

- Security costs were distributed across all service areas to ensure secure access to all systems. In 2007-09, security was part of the Network Services budget and costs distributed only to those customers. This coming biennium, costs are spread to all service lines on an FTE allocation method.
- Enterprise Security Office's decision to cease the "I&AM" (TIM/TAM servers) program resulted in a \$4.1 million loss of revenue to the SDC. SDC eliminated \$4.1 million in expenses through the UNIX reduction proposal.

ADMINISTRATIVE OVERHEAD

- The Lifecycle Replacement POP 255 (\$10,569,578) was replaced with POP 805 (\$8,730,371).
- Transfer of \$2,775,501 million debt service from EISPD. At the end of June 2005, SDC and EISPD exchanged expenditure plans for the COP because SDC was not ready to make the purchases on the original spend plan. This amount needed to be projected in SDC's working capital for next biennium.
- Transfer of one position from EISPD-Enterprise Security Office (\$204,962) included into SDC limitation and absorption of two positions from DCBS (\$403,658) that are not part of limitation.

Comparing 2009-11 LAB Budget to 2007-09 LAB Budget
(without Voice)

SDC (without Voice)	2009-11 LAB Total SDC Operations without Voice	2007-09 LAB Total SDC Operations without Voice
Personnel Services	\$32,571,753	\$31,154,944
Services and Supplies:		
Position Related S&S	\$	\$708,548
Data Processing	\$	\$1,270,900
Hardware and Maintenance	\$	\$0
Software and Maintenance	\$	\$24,362,473
IT Professional Services	\$	\$1,703,849
Telecom	\$	\$7,552,396
Attorney General	\$	\$232,729
State Government Serv Charges	\$	\$751,155
Pass-Through	\$	\$20,515,147
Rent	\$	\$5,961,512
Other S&S	\$	\$3,520,735
Debt Service	\$	\$16,161,328
Total Services and Supplies	\$93,780,898	\$82,740,772
Capital Outlay	\$12,592,669	\$7,292,254
Total Limitation	\$138,945,320	\$121,187,970

Comparing 2009-11 Budget to 2007-09 LAB Budget	2009-11 LAB Administration, Plans & Controls, and Operation Budget	2007-09 LAB Administration, Plans & Controls, and Operation Budget
Personnel Services	\$12,708,276	\$13,948,667
Total Services and Supplies	\$3,743,571	\$2,203,214
Capital Outlay	\$	\$0
Total Limitation	\$16,451,847	\$16,151,881

**STATE DATA CENTER 2009-2011 RATE MODEL
MAINFRAME COMPUTING**

SERVICE AREA DESCRIPTION:

The Mainframe system collects computer processing data every time a user logs into the computer, executes a job, runs reports, or does queries with online files. Usage information is assigned to an agency based on the logical partition (LPAR, where the usage information resides), application name, or user name. The Computer Processing Unit (CPU) usage data is reported daily.

METHODOLOGY:

Rates are determined by dividing the estimated program costs by the unit counts to determine a cost per CPU.

COUNTS:

The counts are based on an average daily CPU minute from the February 2009 CIMS bill, converted to a monthly CPU count.

FACTORS THAT DROVE CHANGES IN RATE:

Current 08-09 rates are presented in a “per second” calculation. The 2009-11 rates will be reported in a “per minute” calculation which is consistent with the billable units reported on a customer’s invoice. The normalization rate (1.21) was removed for the 09-11 rates because the mainframe computing was consolidated onto a single system.

The primary drivers for the 2009-11 rate increase were:

- Changed methodology for allocating SDC floor space/building rent (\$226,061)
- Software costs increases due to at least two forecasted Mainframe upgrades anticipated in the 2009-11 biennium
- Allocation of Security to all service areas (\$923,077)
- Allocation of Production Control FTE to Mainframe Computing

RATE MODEL COMPARISON:

Service Area	Billable Unit	Final 2007-08 Rate	Final 2008-09 Rate	Jan 1, 2009 - June 30, 2009 Rate	July 1, 2009 Adopted Rate With Lifecycle Replacement
Mainframe Hosting	Per CPU Minute, per Day	\$0.76 per CPU second	\$0.76 per CPU second	\$0.85 per CPU second [0.85 * 60 sec = \$51.00 per minute]	\$68.92 Per CPU Minute, per Day

Comparing 2009-11 Budget to 2007-09 LAB Budget	2009-11 LAB Mainframe Budget	2007-09 LAB Mainframe Budget
Personnel Services	\$3,777,437	\$3,232,606
Debt Service	\$2,955,705	\$3,345,171
Total Services and Supplies	\$26,835,978	\$12,365,533
Capital Outlay	\$2,542,019	\$0
Total Limitation	\$36,111,139	\$18,943,310

**STATE DATA CENTER 2009-2011 RATE MODEL
MIDRANGE SYSTEMS**

SERVICE AREA DESCRIPTION:

Midrange systems are systems that run UNIX or IBM System i

METHODOLOGY:

The capacity methodology for midrange systems is being changed for the 2009-2011 biennium. The reason for this change was to identify shared environments and dedicated environments. Agency cost represents the sum of dedicated LPARs and the portion of each shared service they use. Rates are determined by dividing the estimated program costs by the estimated units.

COUNTS:

Counts are based on the number of assigned CPUs in effect on April 2009. The calculation for assigning unit costs is contained in Table A on the following page. Beginning July 1, 2009, counts are locked in for 12 months. SDC will monitor capacity on a monthly basis.

FACTORS THAT DROVE CHANGES IN RATE:

The primary drivers for the 2009-11 rate increase were:

- Changed methodology for assigning capacity
- Changed methodology for allocating SDC floor space/building rent (\$1,435,148)
- Allocation of Security to all service areas (\$461,538)

RATE MODEL COMPARISON:

Service Area	Billable Unit	Final 2007-08 Rate	Final 2008-09 Rate	Jan 1, 2009 - June 30, 2009 Rate	July 1, 2009 Adopted Rate With Lifecycle Replacement
Midrange Hosting	Per number allocated units per customer	\$296.00 per box	\$296.00 per box	\$296.00 per box	\$571.28 per allocated unit per customer

Comparing 2009-11 Budget to 2007-09 LAB Budget	2009-11 LAB Midrange Budget	2007-09 LAB Midrange Budget
Personnel Services	\$2,341,633	\$2,201,897
Debt Service	\$3,759,811	\$5,537,003
Total Services and Supplies	\$6,057,107	\$8,365,655
Capital Outlay	\$1,869,572	\$0
Total Limitation	\$14,028,123	\$16,104,555

MIDRANGE SYSTEMS

TABLE A

1. Calculate a rate per weighted CPU Unit.

A. *Convert assigned CPUs to weighted CPU units using the following calculation:*

Weighted CPU units = number of CPUs assigned to an LPAR multiplied by one of the following factors:

IBM pSeries CPU:	10
Legacy CPU:	3

This factor is derived from the relative processing power of the CPUs

LPARs and assigned CPUs per LPAR are tracked in the SDC Enterprise Midrange inventory.

B. *Determine Allocated Units per LPAR as follows:*

Allocated units per LPAR = Weighted CPU units multiplied by one of the following application factors:

UNIX:	1.00
iSeries:	3.00
Non-Std/Legacy UNIX:	1.50
Midrange Supported Application:	1.20

This factor is derived by applying costs for the system relative to the required administrative overhead.

2. Add Allocated Units from all billable LPARs for all customers to derive Total number of Allocated Units.
3. Rate per Allocated unit = Midrange budget / Total number of Allocated Units. This rate can be divided by 24 to derive the monthly rate per Allocated Unit.

From the above rate, the cost for agency dedicated LPARs is derived as follows:

Rate per Allocated Unit multiplied by Allocated Units in the LPAR

Shared services costs are calculated as follows:

Rate per Allocated Unit multiplied by Allocated Units in the LPARs that support that service

Shared Services are allocated based on agency percentage of utilization according to the following factors:

Databases:

20% on the number of database instances

80% on database size

Web servers and web application servers:

Total bytes transferred during the time period

Ftp services:

Disk space allocated

Tivoli Storage Manager (backups)

Total bytes backed up during the time period

Agency cost = sum of dedicated LPARs and the portion of each shared service they use

**STATE DATA CENTER 2009-2011 RATE MODEL
DISTRIBUTED SERVICES SYSTEMS**

SERVICE AREA DESCRIPTION:

Distributed Services Systems represents the wintel-based computer processing servers. The systems can be standalone or in a shared environment.

METHODOLOGY:

Rates are determined by dividing the estimated costs of the program by the estimated number of billable units to derive a cost per server. At this time, there is no rate difference between a standalone, blade or virtual server.

A separate rate is calculated for remote servers. Remote rates excluded the cost of SDC floor space/rent from its calculations. The definition of remote is any server under SDC's responsibility that is physically not on location at the Data Center or Labor and Industries Building.

COUNTS:

Server counts for rate calculations are based on the number of servers in use as of March 30, 2009. Counts will be refreshed monthly for billing purposes, starting July 1, 2009, and monthly thereafter. Servers used to support various functions of SDC domains will be charged back to those domains.

FACTORS THAT DROVE CHANGES IN RATE:

The primary drivers for the 2009-11 rate increase were:

- Changed methodology for allocating SDC floor space/rent (\$2,715,859)
- Allocation of Security to all service areas (\$884,615)

RATE MODEL COMPARISON:

Service Area	Billable Unit	Final 2007-08 Rate	Final 2008-09 Rate	Jan 1, 2009 - June 30, 2009 Rate	July 1, 2009 Adopted Rate With Lifecycle Replacement
Server Hosting – In House	Per Box, per Month	\$630.00	\$648.00	\$520.00	\$604.43
Server Hosting – Remote	Per Box, per Month	n/a	n/a	n/a	\$499.78

Comparing 2009-11 Budget to 2007-09 LAB Budget	2009-11 LAB Distributed Systems Budget	2007-09 LAB Distributed Systems Budget
Personnel Services	\$6,001,894	\$5,042,122
Debt Service	\$1,654,376	\$1,395,552
Total Services and Supplies	\$8,298,418	\$8,842,611
Capital Outlay	\$1,355,763	\$5,114,969
Total Limitation	\$17,310,451	\$20,395,254

STATE DATA CENTER 2009-2011 RATE MODEL STORAGE SYSTEMS

SERVICE AREA DESCRIPTION:

Data storage is located in two environments: disk storage and tape storage. Disk storage can be local storage (within the processor) and it can be attached to the Storage Area Network (SAN). Tape storage can be on-site or off-site. It is assumed that everything on disk is back up to tape.

Distributed Systems customers will be charged for allocated usage attached to the SAN and the tier is known. When usage is not known, it will be assumed 80GB for local storage, to be charged at Tier 2 rate.

Midrange Systems customers will be charged for allocated usage when the storage is attached to the SAN and the tier is known. Local storage on midrange devices will be billed at Tier 2 rates.

Mainframe Systems customers will be charged for allocated usage when the storage is attached to the SAN.

When storage is allocated for a device shared by multiple customers, the storage charges will be allocated to those customers on the percent utilized of the total allocated storage.

Characteristics of disk tiered storage are:

Tier 1: Highest performing disk storage, fibre connected, fibre channel disk. Disk storage is internal to the Hitachi USP. All components are fully redundant. It is suitable for customer facing, high volume application requirements and key infrastructure applications. Mainframe disk storage is designated as Tier 1 storage.

Tier 2: High performing storage, fibre connected, fibre channel disk. Storage is external behind the Hitachi USP with redundant major components. It is suitable for all but the highest performance requirements and is a cost-effective solution for average volume and reporting application requirements. Midrange systems and local storage will be designated Tier 2 storage.

Tier 3: Standard performing storage, fibre connected, SATA disk. Storage is external behind the Hitachi USP with redundant major components. It is suitable for reporting and historical data.

Characteristics of tape storage are:

Tier 4: On site tape.

Tier 5: Off-site tape. Mainframe and i Series tape stored off-site will not be billed until capacity information can be collected and customer ownership verified.

METHODOLOGY:

Rates are determined by dividing the estimate program costs by the estimated units. Expenses were allocated across the tiers based on industry standards.

STORAGE SYSTEMS

COUNTS:

Storage usage is allocated and usage is measured monthly. Tape usage estimates were originally based on disk usage. Counts were based on March 2009 data. The rate calculation includes a growth rate of 1% compounded monthly.

FACTORS THAT DROVE CHANGES IN RATE:

The primary drivers for the 2009-11 rate increase were:

- Changed methodology for allocating SDC floor space/building rent (\$2,555,358)
- Allocation of Security to all service areas (\$346,154)

RATE MODEL COMPARISON:

Service Area	Billable Unit	Final 2007-08 Rate	Final 2008-09 Rate	Jan 1, 2009 - June 30, 2009 Rate	July 1, 2009 Adopted Rate With Lifecycle Replacement
DISK STORAGE					
Disk (Current Rate)	GB per Month	\$3.37	\$3.37	\$1.52	
Tier 1	GB per Month	n/a	n/a	n/a	\$0.80
Tier 2	GB per Month	n/a	n/a	n/a	\$0.51
Tier 3	GB per Month	n/a	n/a	n/a	\$0.22
TAPE STORAGE					
Tape (Current Rate)	GB per Month	\$0.53	\$0.53	\$0.26	
Tier 4	GB per Month	n/a	n/a	n/a	\$0.18
Tier 5	GB per Month	n/a	n/a	n/a	\$0.40

Comparing 2009-11 Budget to 2007-09 LAB Budget	2009-11 LAB Storage Systems Budget	2007-09 LAB Storage Systems Budget
Personnel Services	\$2,138,619	\$2,139,953
Debt Service	\$4,669,479	\$3,338,676
Total Services and Supplies	\$5,073,941	\$3,897,499
Capital Outlay	\$912,088	\$1,550,000
Total Limitation	\$12,794,127	\$10,926,128

**STATE DATA CENTER 2009-2011 RATE MODEL
NETWORK SERVICES (INC. VOICE)**

SERVICE AREA DESCRIPTION:

Network Services consists of the data network and voice services. Network services staff manage the State's network backbone and contracts for telecommunications and voice services.

Network services have four separate charges:

- Combined Core and Remote rate. This rate covers the basic network access to the internet including management, remote routers, switches and equipment upgrades.
- Local Area Network (LAN) rate covers services that are only used by some network customers. This expense was embedded in the rate for all customers and is now separated out and charged only to customers who receive the service. The 2007-09 charge was based on the customer agency's FTE, as a proxy for the number of computer ports connected to the LAN.
- Site-to-Site Virtual Private Network (VPN) service can be requested by customers who desire encrypted internet service. This is charged only to customers who receive the service. The monthly charge is for specific sites to which a secure network link is provided. Expenses associated with this service include the VPN equipment, software, maintenance, network management and equipment upgrades.
- Network Pass-Through. Frame relay charges, includes transport costs, taxes, interlata charges, installation and domain registrations. These are charged by the telecommunications vendors and passed on to the customer. A 5 percent charge is added on to cover the managing network telecommunications service contracts, attorney general fees associated with these contracts, and personal services to provision the services.

Voice Services has two rates.

- Handsets: This rate is charged per telephone set with one line. A telephone set with multiple lines would be counted as multiple phone sets.
- Pass-Through Charges: This rate is passed through dollar-for-dollar by the vendor on services ordered by the agency. Expenses include long distance, calling cards, TSOs, 800 numbers, repair tickets, and directory listings.

METHODOLOGY:

The Combined Core and Remote rate is calculated for each bandwidth size. The weighted average is based on the number of customers by bandwidth.

The Core/Remote rate for 2 Mb was matched to the 1.5 Mb to reflect migration from frame relate to Ethernet technology which is not offered at 1.5 Mb speed.

All other rates are calculated by the estimated costs divided estimated units.

NETWORK SERVICES

COUNTS:

LAN counts are based on a “per Active Port” base. The definition of Active Port is that it is connected and in use, meaning a computer or printer is plugged in to the outlet.

VPN counts were taken on March 23, 2009 and refreshed July 1, 2009. Counts will be refreshed annually. LAN counts were taken May 6, 2009 and were not refreshed in July. Continue to use the May 6, 2009 counts because of inability to accurately collect data in networks from non-standard network equipment. LAN counts will be revisited January 2010.

Core and remote bandwidth counts were based on the February invoices.

Handset counts were based on February 2009 count of 32,341 handsets in use. Handsets can be equated with a single line; if a handset has multiple lines, the monthly charge would be #lines x monthly rate. The counts were for on-net locations. “On-net” is defined as Salem, Portland and the Willamette Valley Corridor. Off net local costs are billed by the telephone company directly to the agency. Off net long distance costs are billed by DAS to the agency.

FACTORS THAT DROVE CHANGES IN RATE:

February bandwidth charges were used as the base count for rate calculation purposes. Telephone counts were based on February charges.

The primary drivers for the 2009-11 rate increase were:

- Changed methodology for allocating SDC floor space/building rents (Network, \$115,110; Voice, \$72,895)
- Security was removed from Core/Remote combined bandwidth rates and allocated to all service areas (Network, \$692,308, Voice, \$192,308)
- Bandwidth rates were kept lower in 2007-09 to smooth out the impact on non-state agency customers and the expenses were shifted to the LAN rate calculations.

NETWORK SERVICES

RATE MODEL COMPARISON:

NETWORK SERVICES	Billable Unit	Final 2007-08 Rate	Final 2008-09 Rate	Jan 1, 2009 – June 30, 2009 Rate	July 1, 2009 Adopted Rate With Lifecycle Replacement
LAN CHARGES	Per Active Used Port per site	\$9.00	\$9.00	\$29.00	\$8.10
VPN Charges	Per Site, Per month	\$717.00	\$561.00	\$650.00	\$255.39
Core and Remote Combined Bandwidth Charges					
9.6 Kb	Per Month	\$91.50	\$91.50	\$91.50	\$92.75
56 Kb	Per Month	\$188.75	\$188.75	\$188.75	\$191.50
256 Kb/DSL 256 Kb	Per Month	\$315.25	\$315.25	\$315.25	\$319.75
384 Kb	Per Month	\$343.25	\$343.25	\$343.25	\$351.75
768 Kb	Per Month	\$403.50	\$403.50	\$403.50	\$409.25
896 Kb/DSL 896 Kb	Per Month	\$409.50	\$409.50	\$409.50	\$415.25
1.5 Mb	Per Month	\$440.75	\$440.75	\$440.75	\$447.00
2 Mb	Per Month	n/a	n/a	\$518.75	\$447.00
3 Mb	Per Month	\$567.25	\$567.25	\$567.25	\$575.25
4.5 Mb	Per Month	\$662.00	\$662.00	\$662.00	\$671.25
5 Mb	Per Month	\$724.25	\$724.25	\$724.25	\$734.50
6 Mb	Per Month	\$819.25	\$819.25	\$819.25	\$830.75
9 Mb	Per Month	\$914.00	\$914.00	\$914.00	\$927.00
10 Mb	Per Month	\$944.75	\$944.75	\$944.75	\$958.00
15 Mb	Per Month	\$1,008.00	\$1,008.00	\$1,008.00	\$1,022.25
20 Mb	Per Month	\$1,071.25	\$1,071.25	\$1,071.25	\$1,086.50
25 Mb	Per Month	\$1,134.50	\$1,134.50	\$1,134.50	\$1,150.50
30 Mb	Per Month	\$1,197.75	\$1,197.75	\$1,197.75	\$1,214.75
35 Mb	Per Month	n/a	n/a	\$1,244.75	\$1,262.25
40 Mb	Per Month	n/a	n/a	\$1,293.00	\$1,310.75
45 Mb	Per Month	\$1,323.25	\$1,323.25	\$1,323.25	\$1,342.00
50 Mb	Per Month	\$1,386.50	\$1,386.50	\$1,386.50	\$1,406.00
55 Mb	Per Month	n/a	n/a	\$1,440.25	\$1,460.50
60 Mb	Per Month	n/a	n/a	\$1,496.25	\$1,517.50
65 Mb	Per Month	n/a	n/a	\$1,554.25	\$1,576.25
70 Mb	Per Month	n/a	n/a	\$1,615.50	\$1,638.25
75 Mb	Per Month	n/a	n/a	\$1,678.00	\$1,701.75
80 Mb	Per Month	\$1,839.00	\$1,839.00	\$1,839.00	\$1,865.00
85 Mb	Per Month	n/a	n/a	\$1,852.50	\$1,878.75
90 Mb	Per Month	n/a	n/a	\$1,864.75	\$1,891.00
95 Mb	Per Month	n/a	n/a	\$1,878.25	\$1,904.75
100 Mb	Per Month	\$1,890.50	\$1,890.50	\$1,890.50	\$1,917.25
200 Mb	Per Month	\$2,017.00	\$2,017.00	\$2,017.00	\$2,045.50
300 Mb	Per Month	n/a	n/a	\$2,158.25	\$2,188.75
400 Mb	Per Month	n/a	n/a	\$2,309.50	\$2,342.25
500 Mb	Per Month	n/a	n/a	\$2,471.25	\$2,506.25
600 Mb	Per Month	n/a	n/a	\$2,644.00	\$2,681.25
700 Mb	Per Month	n/a	n/a	\$2,829.50	\$2,869.50
800 Mb	Per Month	n/a	n/a	\$3,027.25	\$3,070.00
900 Mb	Per Month	n/a	n/a	\$3,238.50	\$3,284.25
1 Gb	Per Month	\$3,428.50	\$3,428.50	\$3,428.50	\$3,344.00

NETWORK SERVICES

NETWORK SERVICES	Billable Unit	Final 2007-08 Rate	Final 2008-09 Rate	Jan 1, 2009 – June 30, 2009 Rate	July 1, 2009 Adopted Rate With Lifecycle Replacement
Provisioning Charge on Pass-Through Costs					
Charges on Pass-through Costs	Per Site	Dollar-for-Dollar + 5% Provisioning Fee	Dollar-for-Dollar + 5% Provisioning Fee	Dollar-for-Dollar + 5% Provisioning Fee	Dollar-for-Dollar + 5% Provisioning Fee
Voice Services					
Phone Set	Per Set, Per Month		\$37.38	\$37.38	\$37.38
Pass-through charges	Billed on a dollar-for-dollar basis		n/a	n/a	n/a

Comparing 2009-11 Budget to 2007-09 LAB Budget	2009-11 LAB Network Services Budget	2007-09 LAB Network Services Budget
Personnel Services	\$5,603,894	\$4,589,699
Debt Service	\$2,786,930	\$3,788,841
Total Services and Supplies	\$27,945,583	\$30,896,932
Capital Outlay	\$5,913,227	\$627,285
Total Limitation	\$42,249,634	\$39,902,757
Comparing 2009-11 Budget to 2007-09 LAB Budget	2009-11 LAB Voice Services Budget	2007-09 LAB Voice Services Budget
Personnel Services	\$1,519,283	\$1,676,676
Debt Service	\$0	\$531,327
Total Services and Supplies	\$20,530,040	\$28,621,814
Capital Outlay	\$4,246,091	\$842,268
Total Limitation	\$26,295,414	\$31,672,085