UNITE 2023

Understanding Unisys MCP Computing Models – Fixed vs Metering vs Consumption

Session 6358, Mar 8, 13:30-14:30

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VP Software Development
MGS, Inc.

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Computer Business Solutions

MGS, Inc.

- Software Engineering, Product Development & Professional Services firm founded in 1986
- We solve business problems with:
  - Products:
    - SightLine™ Performance/Capacity
    - MGSWEB Web Services
    - Deliver
    - C.A.T.T. Terminal Emulator
    - File Manager for MCP
  - Professional Services
    - Performance/Capacity Management
    - Installation Services
    - MCP Training
  - Software Engineering Services
    - ClearPath MCP
    - Windows

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Hardware Based Capacity

In the beginning ….

- Your company purchases specific model of computer
  - Unisys Advertised Performance/Capacity levels of its system
  - RPM – Relative Performance Measure
  - Based on Unisys proprietary benchmarking system

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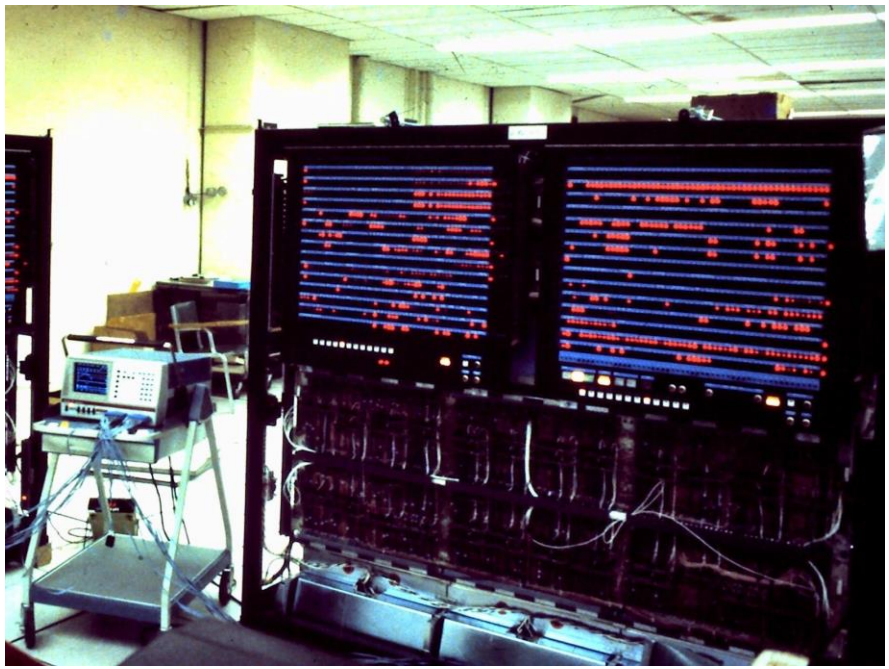
Hardware Based Capacity

- Generally one level of processor performance and you buy “n” processors
- Example B7800 CPM



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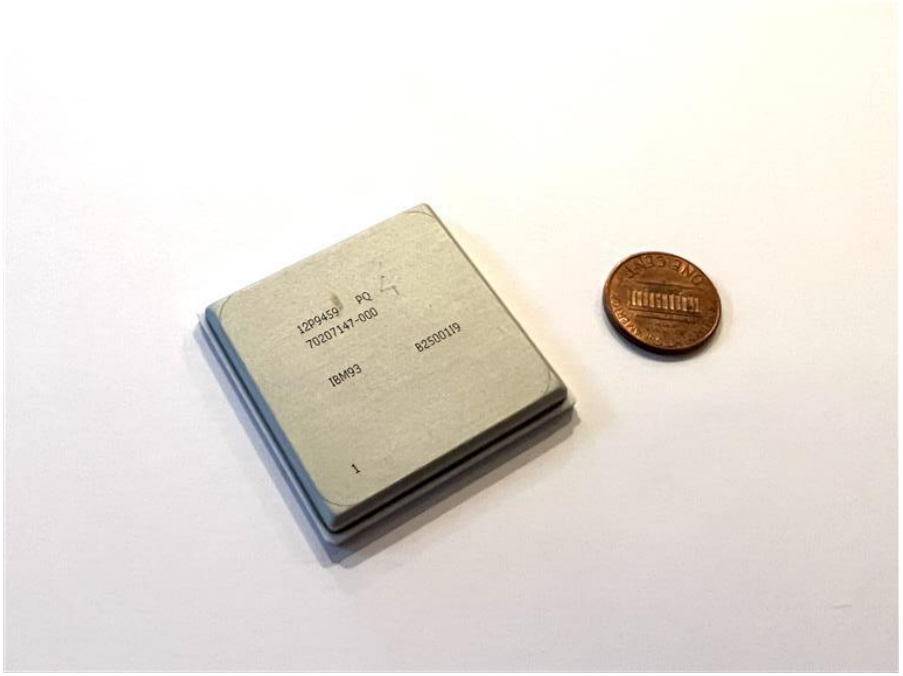
Hardware Based Capacity

- Eventually technology shrinks
- Speed gets faster, increased density of MCP CPUs
- Example A12 CPU



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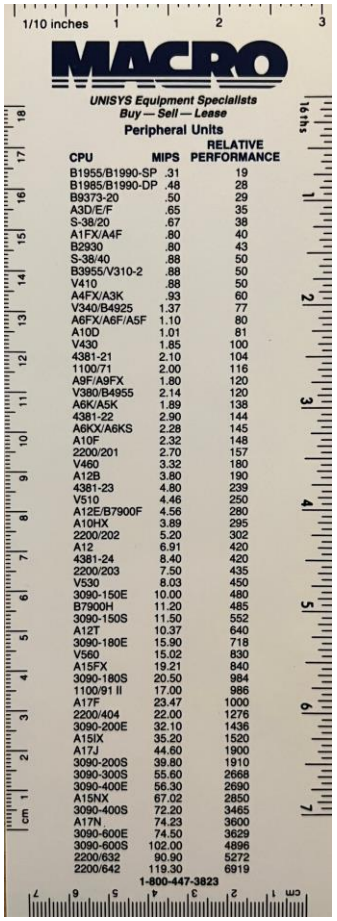
Hardware Based Capacity

- Unisys provides a wide range of capacity
- Example 1990's RPM Chart
- Customer buys by style ID



MACRO

UNISYS Equipment Specialists
Buy — Sell — Lease

Peripheral Units

CPU	MIPS	RELATIVE PERFORMANCE
B1955/B1990-SP	.31	19
B1985/B1990-DP	.48	28
B9373-20	.50	29
A3D/E/F	.65	35
S-38/20	.67	38
A1FX/A4F	.80	40
B2930	.80	43
S-38/40	.88	50
B3955/V310-2	.88	50
V410	.88	50
A4FX/A3K	.93	60
V340/B4925	1.37	77
A6FX/A6F/A5F	1.10	80
A10D	1.01	81
V430	1.85	100
4381-21	2.10	104
1100/71	2.00	116
A9F/A9FX	1.80	120
V380/B4955	2.14	120
A6K/A5K	1.89	138
4381-22	2.90	144
A6KX/A6KS	2.28	145
A10F	2.32	148
2200/201	2.70	157
V460	3.32	180
A12B	3.80	190
4381-23	4.80	239
V510	4.46	250
A12E/B7900F	4.56	280
A10HX	3.89	295
2200/202	5.20	302
A12	6.91	420
4381-24	8.40	420
2200/203	7.50	435
V530	8.03	450
3090-150E	10.00	480
B7900H	11.20	485
3090-150S	11.50	552
A12T	10.37	640
3090-180E	15.90	718
V560	15.02	830
A15FX	19.21	840
3090-180S	20.50	984
1100/91 II	17.00	986
A17F	23.47	1000
2200/404	22.00	1276
3090-200E	32.10	1436
A15IX	35.20	1520
A17J	44.60	1900
3090-200S	39.80	1910
3090-300S	55.60	2668
3090-400E	56.30	2690
A15NX	67.02	2850
3090-400S	72.20	3465
A17N	74.23	3600
3090-600E	74.50	3629
3090-600S	102.00	4896
2200/632	90.90	5272
2200/642	119.30	6919

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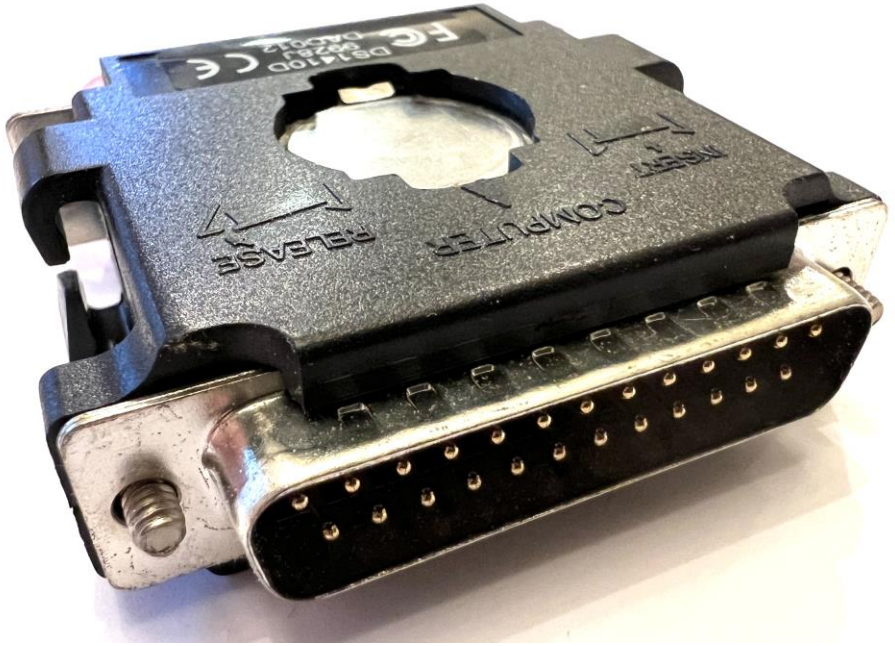
Hardware Based Capacity

- Adjustable through Dongle Controlled
  - Typically on emulated Machines
  - Parallel Port or USB



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Software Based Capacity

- General Description
  - Capacity on Demand
  - Metering Model
  - Consumption Model

MCP Resource Licensing Guide (8225 5902-001)

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Software Based Capacity

- Capacity on Demand (COD)
  - Libra systems use software keys for CPM capacity/count
  - Processor License Keys
    - Permanent
    - Terminating
    - Normal Temporary
    - Disaster Temporary
    - Test

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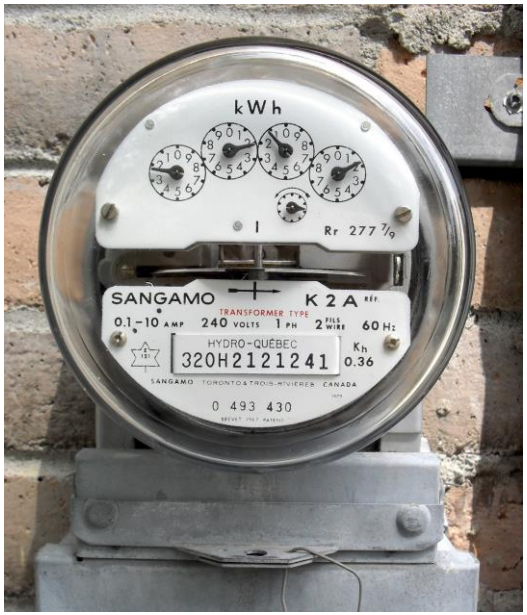
Software Based Capacity

- Capacity on Demand (COD)
  - Controlled through IK command
  - Allocate licensed capacity to different partitions
  - Available on both Libra systems (proprietary) and ClearPath Software Series systems (emulated)

Metered Capacity

- Libra Utility Computing
  - Billing unit RPM*Seconds or MIPS*Months
  - Requires proprietary hardware
  - Monthly Report sent to Unisys



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Metered Capacity

- Libra Utility Computing
  - Managed through SYSTEM/IP1SUPPORT
  - Takes CPU RPM rating and multiplies times application CPU seconds
  - Aggregates RPM*Seconds for all applications for time period
  - Includes Multi-processor loss

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Metered Capacity

- Libra Utility Computing
  - MIPS*Months =
    (RPM*Secs) /
    [(24.3 RPM/MIP) *
    (2,629,800 Secs/Month)]
    or
  - MIPS*Months =
    (RPM*Secs)/63904140
  - Note standard (fixed) seconds per month

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Metered Capacity

- Base-Plus Usage Billing
  - There is a Pre-paid baseline monthly usage
  - Monthly Reports sent to Unisys
  - Customer charged for usage over baseline

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Metered Capacity

- Pre-Paid Usage Billing
  - Phone card paradigm
  - Pre-pay for “n” MIPS*Months
  - Monthly Reports sent to Unisys
  - You may need to add MIPS*Months if you run out early

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Metered Capacity

- Metering Governor
  - RPM is ODT Adjustable
  - IK IPLIMIT command
  - System can be set to run slower than max capacity
  - RPM*Seconds accrued at a slower rate

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Metered Capacity

- Metering Report
  - Monthly report emailed
  - Past reports under *METERDATA/=
  - Control through: *INSTALLATION/OPTIONS *METER/EMAIL/DESTINATIONS
  - You can resend old reports

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Consumption Capacity

- MCP simply tracks the number of CPU seconds that are consumed
  - It also regularly calibrates the running the MCP partition against the Unisys “reference” platform
  - Monthly sends Unisys a report of consumed resource
  - Reports saves under *CONSUMPTION/=

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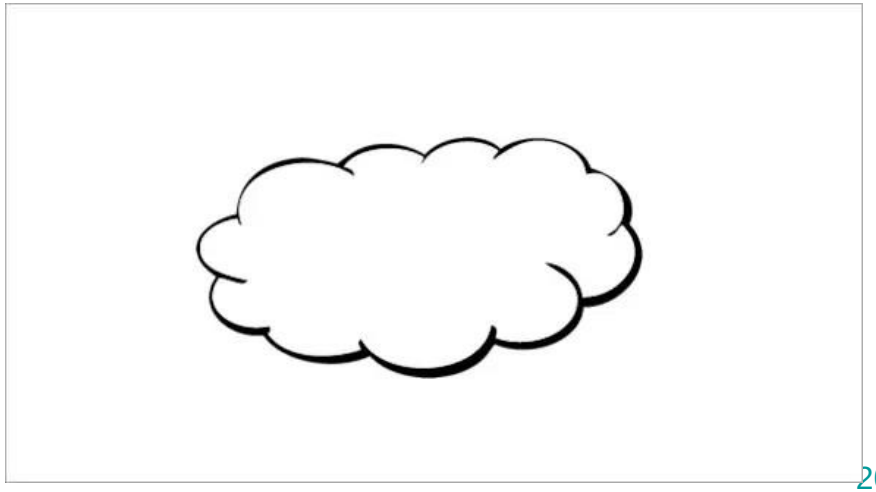
Consumption Capacity

- Calibration Ratio
  - Once a minute the system calibrates the running the MCP partition against the Unisys “reference” platform
  - Reflects your Intel CPU speed vs the “reference platform
  - The Calibration Ratio is reported in the Monthly report to Unisys along with total CPU seconds

Consumption Capacity

- Cloud Value Unit (CVU)
  - Billable Consumption Model unit
  - Normalized CPU seconds converted to standard billing units



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Consumption Capacity

- Available on high-end CSS Systems
  - Gold
  - Platinum
  - Titanium

  (and their “Developer” systems)

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Pros & Cons

- Capacity on Demand Model
  - Fixed price
  - Not based on consumed resource
  - Time constrained
  - There may be unused resource in the licensed time frame

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Pros & Cons

- Libra Metering Model
  - Set a baseline lower than total configuration value
  - Only billed for original baseline and any overage
  - Base-Plus - Monthly overage billing (if needed)
  - Pre-Paid – End overage billing (if needed)

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Pros & Cons

- CSS Consumption Model
  - Run anywhere (local equipment, cloud)
  - Hardware agnostic
  - Overage billing

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Questions?

- Thank you for your attention
- Are there any questions?

This presentation is available at:

www.mgsinc.com/download.html

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